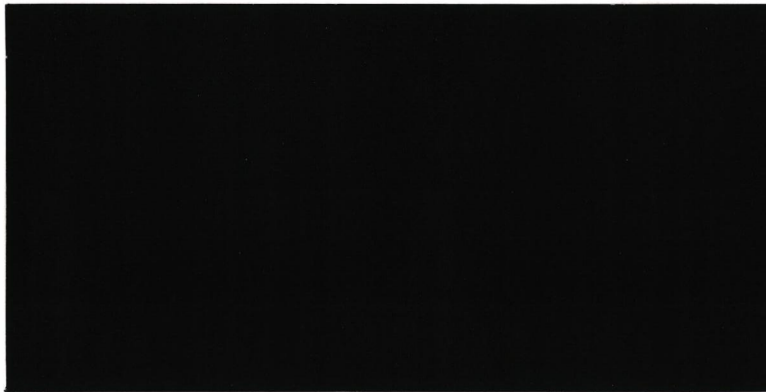




**JACOBS ENGINEERING GROUP INC.**

**ALTERNATIVE REMEDIAL  
CONTRACTS STRATEGY  
REGIONS VI, VII & VIII**



**REMEDIAL PLANNING ACTIVITIES  
AT  
SELECTED UNCONTROLLED HAZARDOUS  
SUBSTANCE DISPOSAL SITES  
U.S. EPA CONTRACT NO. 68-W8-0122**

**IN ASSOCIATION WITH,  
TERRACON CONSULTANTS EC, INC.  
McCLELLAND ENGINEERS, INC.**



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RCRA Records Center

#45  
ACC #1

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
ALTERNATIVE REMEDIAL CONTRACTING STRATEGY  
REGION VI, VII, VIII**

**ENVIRONMENTAL PRIORITIES INITIATIVE  
PRELIMINARY ASSESSMENT  
VOLUME I**

**SILVANUS PRODUCTS, INC.  
40 MERCHANT STREET  
STE. GENEVIEVE, MISSOURI  
EPA ID NO. MOD092351642  
TECHNICAL SUPPORT ACTIVITIES  
FY '93**

**U.S. EPA CONTRACT NO. 68-W8-0122  
U.S. EPA WORK ASSIGNMENT NO. 47-7JZZ  
U.S. EPA REGION VII**

**JACOBS ENGINEERING GROUP INC.  
10901 W. 84TH TERRACE, SUITE 210  
LENEXA, KANSAS 66214  
JACOBS PROJECT NO. 12-D247-19**

**TERRACON ENVIRONMENTAL, INC.  
7810 NW 100TH STREET  
KANSAS CITY, MISSOURI 64190-1541**

**SEPTEMBER 1993**

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# JACOBS ENGINEERING GROUP INC.

10901 WEST 84th TERRACE, SUITE 210, LENEXA, KANSAS 66214  
TELEPHONE (913) 492-9218 • FAX (913) 492-6198

September 29, 1993

Mr. Gene Williams  
Missouri Department of Natural Resources  
Division of Environmental Quality  
205 East Jefferson Street  
Jefferson City, Missouri 65102

**Re:    EPA Contract No. 68-W8-0122  
         Environmental Priorities Initiative  
         Preliminary Assessment Report for  
         Silvanus Products, Inc.  
         Ste. Genevieve, Missouri  
         EPA Work Assignment No. 47-7JZZ  
         Jacobs Project No. 12-D247-19**

Dear Mr. Williams:

Enclosed are two copies of the Final Environmental Priorities Initiative/Preliminary Assessment Report for the Silvanus Products, Inc. facility in Ste. Genevieve, Missouri. A copy has also been forwarded to Ms. Diane Huffman, U.S. Environmental Protection Agency (EPA) Region VII, for concurrent review.

As you know, Volume II of the report is the CERCLA Preliminary Assessment which was completed and submitted in September 1992. Attached is the Summary of Recommendations for the facility.

Please contact either of the undersigned at (913) 492-9218 if you have any questions or comments.

Sincerely,

Stephanie B. Doolan  
ARCS Site Manager

  
Fred D. Reynolds, P.E.  
ARCS Program Manager

Enclosures

cc: Ms. Diane Huffman, EPA Work Assignment Manager

RECEIVED

SEP 30 1993

RCOM SECTION

ENVIRONMENTAL PRIORITIES INITIATIVE  
PRELIMINARY ASSESSMENT  
SILVANUS PRODUCTS, INC.

<u>X</u>	Completed in accordance with EPA Guidance
<u>X</u>	Fulfills requirements of the EPA-approved Work Plan
<u>X</u>	Spellcheck run on submittal
<u>X</u>	Historical operations and waste management practices investigated and incorporated into submittal ( <i>where known</i> )
<u>X</u>	Regulatory history investigated and discussed in submittal
<u>X</u>	Figure illustrating site location
<u>X</u>	Figure identifying each SWMU
<u>X</u>	Potential receptors (surrounding population and natural resources) described
<u>X</u>	Public water supply wells identified
<u>X</u>	Groundwater and surface water use described
<u>X</u>	SWMU/AOC descriptions
<u>X</u>	All statements substantiated with references
<u>X</u>	Recommendations developed and included
<u>X</u>	SWMUs/AOCs and evidence of release summarized in a table

Stephan B. Doolan  
Project Manager

9/29/93  
Date

RECEIVED  
SEP 30 1993  
RCOM SECTION  
SEP  
RCOM SECTION

**ENVIRONMENTAL PRIORITIES INITIATIVE  
PRELIMINARY ASSESSMENT  
SUMMARY OF RECOMMENDATIONS**

**SILVANUS PRODUCTS, INC.  
STE. GENEVIEVE, MISSOURI  
EPA ID NO. MOD092351642  
September 29, 1993**

The Missouri Department of Natural Resources (MDNR) approved Silvanus' Closure Plan for the former drum storage area, Solid Waste Management Unit (SWMU) Number 1 on July 15, 1992. To date, RCRA Closure has not been implemented for this unit. Due to the storage of hazardous wastes in excess of 90 days by the facility's previous owner, Georgia-Pacific, and that the facility has not implemented the approved Closure Plan, Silvanus Products remains classified as an Interim Status Treatment, Storage, and Disposal Facility (TSDF) which subjects the facility to the requirements of 40 CFR Parts 262 through 266, 268, and 270 and the notification requirements of Section 3010 of RCRA.

The facility indicated that prior to 1992, they have considered themselves to be conditionally-exempt, small quantity generators of hazardous wastes, generating wastes in an amount of less than 220 lbs. per month. From the time Silvanus Products purchased the facility from Georgia-Pacific in 1984 until 1992, Silvanus Products disposed these wastes with the general refuse at the Mineral Point Landfill, which was closed in May 1993. However, the facility remains classified as an Interim Status TSDF because the Closure Plan for the former drum storage area was never implemented. As a result, the facility incorrectly assumed that it was a conditionally-exempt, small quantity generator and its waste rags soaked with cleaning solvents and inks (EPA waste code F003) and waste petroleum naphtha from the parts washers (EPA waste code D001) were illegally disposed in the county landfill.

The facility also illegally discharged the waste fixer/developer (EPA waste code D001) to the sanitary sewer without the prior written or verbal permission of the local POTW.

The potential exists for an environmental release to occur from the flammable material storage area, SWMU Number 2. There is no secondary containment, drums are exposed through the surrounding fence, and access to the site is uncontrolled. Secondary containment needs to be provided for this storage unit.

A filter needs to be installed in the ventilation system for SWMU Number 10, the antiquing spray booth, to prevent releases of airborne stains to the ambient air.

There has been a release of air compressor oil to the soils at Area of Concern (AOC) A. Although this oil has not yet been characterized for disposal, it is believed to be waste oil (Missouri waste code D098). This oil needs to be characterized in order to determine if a cleanup is necessary.

In general, no further sampling at the facility is recommended because the illegal disposal of wastes occurred at off-site locations (in the sanitary sewer and to the county landfill) where sampling is unlikely to detect the wastes. The chemical characteristics of the wastes are that they are volatile organic compounds that are unlikely to remain in the sewer system to sample, and finding the relatively small quantity of Silvanus wastes in the county landfill would be difficult.

**"ENFORCEMENT SENSITIVE"**

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## EXECUTIVE SUMMARY

A Preliminary Assessment (PA) and Visual Site Inspection (VSI) were conducted by Terracon Environmental, Inc. (Terracon), on behalf of the U.S. Environmental Protection Agency (EPA) Region VII, at Silvanus Products, Inc. in Ste. Genevieve, Missouri on May 19, 1992.

Silvanus Products, Incorporated, is located at 40 Merchant Street in Ste. Genevieve County, Ste. Genevieve, Missouri. The site is located in the southeast quarter of Section 21, Township 38 North, Range 9 East.

Silvanus Products manufactures decorative printed and silk-screened vinyl products such as bank passbooks, checkbook covers, and vinyl covered notebooks. Printing and silk screening of paper products also occurred at the Silvanus facility. The original plant was built by General Passbook in 1927. It was purchased in 1978 by Georgia-Pacific and acquired by Silvanus Products in 1984. This facility has been in continuous operation since 1927 with fourteen building additions to the facility throughout its history.

Georgia-Pacific operated an interim status hazardous waste storage area which was a 15-foot by 35-foot room used to store drums of solvent-contaminated rags and waste ink generated from the printing processes. Sixteen drums of this waste were accumulated from 1980 to 1984, and were shipped to Chemical Waste Management in Emelle, Alabama for disposal prior to transfer of facility ownership to Silvanus. No closure activities were conducted for the storage area. Until 1992, Silvanus operated as a small-quantity generator (generating less than 220 lbs. per month of each hazardous wastestream) and has not used the storage area for hazardous wastes. Currently, Silvanus generates more than 220 lbs. per month of their hazardous wastestreams; however, the waste is stored for less than 90 days and is not accumulated in the former interim status storage area. Silvanus Products submitted a RCRA Closure Plan for the storage area used by Georgia-Pacific which was approved by the Missouri Department of Natural Resources (MDNR) with modifications on July 15, 1992. The Silvanus Closure Plan has not yet been implemented (Reference 67).

Potable water for the area is supplied by four groundwater wells which are owned by the City of Ste. Genevieve and are located approximately one-quarter of a mile south of the site. The total production from these wells is rated at 2.6 million gallons per day. There are no surface water intakes for drinking water production within 15 miles downstream of the site.

The surface water drainage pathway from the property is to the east and south. Surface water run-off from the site flows east through culverts in flood levees built by Silvanus and, from there, finds its way to the Gabouri Creek system east of the facility. This drainage area flows to the southeast approximately one mile where it empties into the Mississippi River.

Two former and ten existing Solid Waste Management Units (SWMU) were identified at the site during the VSI. These included the former drum storage room, the flammable material storage area located west of the receiving dock, the storage area for recyclable lead scrap generated in typesetting operations, two present satellite collection points for solvent/ink contaminated rags generated in the printing and silk-screening processes, the waste fixer/developer drum outside the darkroom, the Safety-Kleen parts washers in the printing and maintenance areas, the adhesive and antiquing spray booths, the former paper waste incinerator in the drum storage room, and a general refuse dumpster. One Area of Concern (AOC), the oil discharge from a plant air compressor, was also identified during the VSI.

## 1.0 INTRODUCTION

A Preliminary Assessment (PA) and Visual Site Inspection (VSI) were conducted by Terracon Environmental, Inc. (Terracon), on behalf of the U.S. Environmental Protection Agency (EPA) Region VII, for Silvanus Products, Incorporated, (Silvanaus Products) in Ste. Genevieve, Missouri. Terracon, as a subcontractor to Jacobs Engineering Group Inc. (Jacobs) within the EPA Alternative Remedial Contracting Strategy (ARCS) contract, performed these tasks as a part of the EPA Environmental Priorities Initiative (EPI), Work Assignment Number 47-7JZZ. Mr. Gene Williams, the direct state site contact, and Mr. David Freise, both with Missouri Department of Natural Resources (MDNR), were present at the VSI.

### 1.1 Objective

The objective of the EPI/PA was to conduct on-site and cursory off-site inspections of the Silvanus Products facility in order to characterize Solid Waste Management Units (SWMU), associated releases, and other Areas of Concern (AOC). The goals of the PA inspections are to determine whether or not a release has occurred or has the potential to occur, to identify any immediate threats to human health or the environment from an actual or potential release, to inventory SWMUs, and to determine if a site has the potential to be placed on the National Priority List (NPL) based on the PA Scoresheet (Revised Hazard Ranking System). The PA Scoresheet for the site is provided in Volume II of this report.

### 1.2 Scope of Work

The scope of this investigation included the following activities:

- A search of EPA and state files in an attempt to obtain and review specific documents that would help provide background information on historic and current facility processes and hazardous waste management practices.
- Development of a detailed site base map to scale including site features, SWMUs and AOCs.
- Evaluation of target populations within a four-mile radius from the site with regard to groundwater and air, and within a 15-mile downstream distance for surface water.
- A well survey within a four-mile radius of the site.
- Photodocumentation of all SWMUs and related releases and exposure pathways.

## 2.0 SITE DESCRIPTION

### 2.1 Site Location

Silvanus Products is at 40 Merchant Street in Ste. Genevieve, Missouri. The site is located in the southeast quarter of Section 21, Township 38 North, Range 9 East (Reference 1). Coordinates of the site are 37°58'48" North latitude and 90°02'30" West longitude (Reference 4). The site is bordered by the Missouri-Pacific Railroad on the east and residential/commercial buildings on the west (Reference 48). North of the building on company property is a large gravel parking lot (Reference 48). Beyond the parking lot lie other

downtown businesses (Reference 48). The Inn Ste. Gemme Bed and Breakfast is northwest of the property. South of the facility is the city water department office (Reference 48). Figure 1 depicts the site location. Figure 2 depicts the area within a four-mile radius of the site. Figure 3 is the site plan.

## 2.2 Site Features

The facility property is a triangular tract of land occupying approximately 2.88 acres, situated within the city limits of Ste. Genevieve, Missouri. The site elevation is 380 feet above mean sea level, and it lies within the 25-year flood plain of the Mississippi River (Reference 61). The site measures 264 feet, east to west, at its widest point and 600 feet, north to south, at the deepest point of the triangle (Figure 3). Access to the site is not controlled. The major feature is the combination brick, steel and lumber building, which covers most of the site. The plant building now occupies 65 to 75 percent of the property. The original 1927 building has had 14 additions throughout its history (Reference 48). Silvanus Products constructed the warehouse area, the most recent addition, in 1990 (Reference 57).

The ground surface slopes downward to the east and slightly south. At the eastern edge of the property is an earthen levee covered with cultivated grasses (Photograph 3). Stormwater drainage for the northern portion of the site consists of a large stormwater culvert on the northeastern border of the property (Photograph 4). Stormwater drainage for the western and southern portions utilizes an underground collection system which runs under the southwest corner and the extreme south end of the building. Water travels southeast, starting from the west side of the building and ends on company property at the stormwater culvert on the southeast end of the levee (Photographs 2, 7, and 8). From there, the water travels through culverts which pass through the levee and onto the adjacent railroad property (Figure 3).

Based on 1990 Census data, the population within increments of a four-mile radius is as follows (Reference 69):

<u>Radius Sector</u>	<u>Population</u>
0 - .25 mile	275
.25 - .50 mile	826
.50 - 1.0 mile	3,368
1.0 - 2.0 miles	701
2.0 - 3.0 miles	501
3.0 - 4.0 miles	300

## 2.3 Ownership History

The Silvanus Products facility was originally constructed in 1927 by the General Passbook Company which operated the facility under that name until its sale to the Georgia-Pacific Corporation in 1978 (Reference 48). Georgia-Pacific operated the plant as a print-processing shop for vinyl covered products (Reference 48). In 1984 the facility was again sold to the present owners, Silvanus Products Inc. (Reference 48). Facility operations have undergone no significant changes since the present owners took possession of the property (Reference 48).

## 2.4 Nature of Operations

The Silvanus Products facility operates principally as a print and silk-screening manufacturing plant for vinyl notebook binders, menu covers, checkbook covers, paper products, and related items (Reference 48). The facility also manufactures bankbooks (Reference 4).

Processed vinyl and paper stock is purchased from third party suppliers and cut, printed, and assembled on-site (Reference 48). Main processes include the offset printing process and the silk-screen process (Reference 48). The binding-assembly areas are used by each of the press operations to complete assembly of the final product as needed (Reference 48). Support areas for both press operations include a darkroom photography area, building-machine maintenance area, and warehouse (Reference 48).

### 2.4.1 Printing Process

The printing process is a standard offset printing operation (Reference 48). Some typeset printing is also performed (Reference 48). Original artwork, logos, etc., are captured on film, developed on-site, and transferred to negative plates which are used on the printing presses to transfer the ink to vinyl or paper in the designs required (Reference 57). Fixer and developer waste solutions are generated in three areas and collected in one 55-gallon drum (SWMU Number 6), which is kept outside the darkroom (Reference 48). A varitype typesetter is stationed in the office area, and used to create copies of original artwork or lettering (Reference 48). Solutions used there are changed/replenished approximately every two weeks and include one gallon of developer and one gallon of fixer (Reference 48). The darkroom solutions are changed/replenished approximately once a month; volumes vary (Reference 48). Located just outside of the darkroom is the plate developer where the final transfer of artwork is made to negative plates used for offset printing (Reference 48). Solutions in the plate developer are changed/replenished every eight weeks; volumes vary (Reference 48). From these three sources, one drum of waste fixer/developer is generated every six months (Reference 48). Disposal of this material is currently handled by Safety-Kleen, EPA Identification Number KYD053348108, whenever a drum becomes full (Reference 57).

There are four offset presses used in the Silvanus printing process (Reference 48). Ink is placed in a reservoir on each press (Reference 48). Water is used to keep the press rollers damp (Reference 48). This water becomes tainted with ink residue and is collected and discharged to the public sewer system (Reference 48). A sample of the water was tested by Safety-Kleen in early 1992 and was found to be nonhazardous (Appendix H). Silvanus possesses no permit, however, from the local POTW for this discharge (Reference 66). During normal operation, drum rollers and other press parts must be periodically cleaned of residual ink to prevent fouling printed products (Reference 48). In this cleaning process, a solvent applied to cotton rags is used to wipe the presses (Reference 48). These soiled rags are stored at each press station in covered five-gallon cans, which are emptied at the end of each shift into a 55-gallon drum (SWMU Number 4), centrally located in the printing shop area (Reference 48). Excess ink generated due to press color changes, etc., also goes into these five-gallon cans (Reference 48). The 55-gallon drum containing waste rags and ink from the printing operation is filled approximately every six to eight weeks and picked up by Safety-Kleen (Reference 48).

Within the printing area, a commercial parts washer is maintained by Safety-Kleen (SWMU Number 7, Photograph 24). The twenty gallons of petroleum naphtha in this washer is changed out every six weeks by the servicing company (Reference 48).

Two Ludlow lead-type typesetters are also located within the printing area (Photograph 12). Thirty-pound lead bars are heated to 450 degrees and used to form linotype slugs (Reference 48). Waste/scrap lead used in this operation is collected and returned to United American Metals Corporation in Chicago for recycling (Reference 48). This scrap is stored in an open 55-gallon drum located next to the typesetters (SWMU Number 3, Photograph 13). In the 18 months preceding May 1992, Silvanus purchased 3,757 pounds of lead from their distributor and recycled 3,460 pounds (Reference 62). The remaining lead, which is 297 lbs. in this instance, is either stored as printing type to be used later, unused lead, and/or is accumulating in the 55-gallon drum for recycling (Reference 67). The linotype presses which use this typeset require the same ink, solvents, solvent rags, and waste containment used with the offset printing operation outlined above (Reference 48). Waste rags and ink from the linotype press process are accumulated in the 55-gallon drum in the printing shop (SWMU Number 4).

#### **2.4.2 Silk-Screen Process**

The silk-screening process involves seven semi-automatic and one automatic silk-screen presses, three covered ultra-violet dryers, and one ultra-violet light room (partitioned from processing room with cloth drapes) (Reference 48). Ink storage is maintained along the east wall and consists of four open storage racks with six shelves to each rack. Two racks consist of all six shelves filled with half-gallon cans of ink. The remaining two racks contain one-gallon cans of ink on the bottom five shelves and half-gallon cans on the top shelf (Photograph 14). At each silk-screen press there are two covered cans for soiled rags as well as a clean solvent can (Photograph 18). The two rag storage container system allows press operators to reuse less soiled rags and store them separately between uses in a five-gallon container (Reference 48). Once the rags become full of ink, they are discarded to the ten-gallon waste container (Reference 48). Excess ink waste produced during ink application to the press is also discarded to the large container (Reference 48). Located among the silk-screen presses is a 55-gallon drum (SWMU Number 5) which is used to collect the soiled rags from the press stations (Reference 48). This waste generation, accumulation, and disposal is identical to the waste management practices employed in the offset printing department.

The two-foot by three-foot screens used in the silk-screen printing process are washed clean when the job batch has been completed (Reference 48). Cleaning solutions are applied to the screen and rinsed clean by a high pressure sprayer (Photograph 19). Fifteen to twenty screens are cleaned per day in a batch process (Reference 48). Wastewater from this process is discharged directly to the POTW (Reference 48). A sample of the water was tested by Safety-Kleen in early 1992 and was found to be nonhazardous (Appendix H). According to personnel contacted at the POTW, no permit was issued for this discharge (Reference 66).

Following the printing process (from silk-screening or offset printing), vinyl products are cut to size and sent to the "sealing" room where the vinyl is arranged around cardboard or styrofoam inserts as appropriate and sealed using radio waves to bond the edges together (Reference 48). The product is then sent to assembly where ringbinders are mechanically attached to notebook binders (Reference 48).

Vinyl and paper waste trim generated during these manufacturing operations is recycled when possible (Reference 48). In addition, paper trim may be used as packing material to ship final products (Reference 48). All vinyl and paper scrap too small or too dirty to recycle or use as packing material becomes a part of the general refuse wastestream (Reference 48). General refuse, picked up by the Tutor Refuse Services Company in Ste. Genevieve, was previously sent to the Mineral Point Landfill in Desloge, Missouri until it was closed on May 31, 1993. Currently, the general refuse wastestream is sent to a landfill in DeSoto, Illinois (Reference 68).

One 55-gallon drum of waste oil produced from compressor operation is accumulated in a drum at the flammable materials storage area and will be disposed by Safety-Kleen (References 48 and 67). The drum, which was not yet full at the date this report was finalized (Reference 67), is stored in the flammable material storage area located west of the loading dock (SWMU Number 2, Photograph 7).

#### **2.4.3 Ancillary Processes**

Ancillary processes include "embossing", "antiquing", sewing, and turned-edge sealing some of the vinyl and/or paper products. Flammable solvents and adhesives (hide glues) are used in these activities. An adhesive spray booth is operated in the sealing area (SWMU Number 9). Air filters in the booth are changed as needed and disposed as part of the general refuse wastestream. A second booth is used for "antiquing" (staining) and vents directly to the outside air (SWMU Number 10).

#### **2.5 Permit and Regulatory History**

Georgia-Pacific submitted a Notification of Hazardous Waste Activity Form (EPA Form 8700-12) on August 18, 1980 which indicated activity as a generator and TSD facility (Reference 2). The EPA waste codes listed on the form were F001, F002, F003, F004, F005, U002, U031, U112, U117, U159, U239, D001, D002, D003, and D004. Georgia-Pacific received its Missouri generator identification number in September 1980 (Reference 38). On November 18, 1980, Georgia-Pacific submitted a RCRA Part A Permit Application for a 15-foot by 35-foot room used to store waste rags containing solvent (Reference 4). The Part A application was modified in 1984 with the deletion of waste codes D001, D002, and D003 (Reference 26). This document indicates container storage capacity of 5,500 gallons. Generation volumes for each of the wastes identified above were estimated at 1,500 pounds per year (Reference 4). The Georgia-Pacific 1982 Annual Generator and Facility Hazardous Waste Report indicates that a total of 3,600 pounds of rags soiled with printer's ink and solvents were generated and stored on the premises (Reference 19).

A letter was sent to Georgia-Pacific by EPA Region VII in May 1982 indicating that its facility may qualify as a small quantity generator and thus be exempt from RCRA regulations (Reference 10). The response from the company, dated August 26, 1982, stated that in light of potential legislation expanding RCRA to cover small generators, Georgia-Pacific requested EPA continue to process its Part A permit (Reference 11).

In 1982, Georgia-Pacific received its first state-supervised Compliance Evaluation Inspection (CEI) (Reference 39). Findings documented in this report include: no liquid hazardous waste generated, cleaning rags with waste residue generated and stored in 55-gallon drums, job descriptions lack identification of hazardous waste management duties, and no sign posted restricting access to hazardous waste storage area (Reference 39). A reply from Georgia-Pacific dated August 18, 1982 indicates the company took corrective action to the CEI findings (Reference 40).

In May 1984, Georgia-Pacific informed MDNR that the facility in Ste. Genevieve had been purchased by the present owners, Silvanus Products, Incorporated, (Reference 27) and requested that the generator number and interim status be transferred to the new owner (Reference 27). Silvanus Products then notified MDNR that Georgia-Pacific's interim status and hazardous waste generator number would not be applicable to Silvanus Product's plant operation and requested this number and status not be transferred to the new company (Reference 64). In June 1984, MDNR Waste Management Program notified Georgia-Pacific that the company's status would be reclassified, and both the Missouri and RCRA identification numbers would be retained but

placed on an inactive status (Reference 41). On June 21, 1984, Georgia-Pacific shipped the waste stored at the facility to Chemical Waste Management in Emelle, Alabama using Kies Transport (EPA Identification Number KSD980853246). No closure activities for the RCRA permitted storage unit were undertaken.

Silvanus Products' 1988 CEI report stated that "Silvanus Products Incorporated is not registered with the Department (MDNR) for any hazardous waste activity" (Reference 30), and also stated that Georgia-Pacific's Missouri Generator ID number would be assigned to the facility pending approved closure of the RCRA-permitted storage unit. Silvanus was considered by MDNR to be a treatment, storage, and disposal (TSD) facility since closure documentation and approval had not been effected by either Georgia-Pacific or Silvanus (References 31 and 44).

Silvanus Products submitted the "Post-Closure Completeness Report" in 1991 (Reference 65). This report attempts to address the Closure Plan and satisfy closure requirements by showing that no further action should be required.

In November 1991, MDNR informed Silvanus that a consulting engineering firm commissioned by MDNR would be conducting a review of the facility's Closure Plan (Reference 33), which was dated September 1, 1982 and entitled "Closure Plan Georgia-Pacific Corporation" (Reference 33).

In March 1992, Silvanus Products issued a revised Closure Plan based on MDNR review of the 1982 Closure Plan submitted by Georgia-Pacific (Reference 47) (Appendix F). This revised plan was reviewed and approved by MDNR on July 15, 1992. The closure of the former storage area has yet to be implemented (Reference 67).

### **3.0 ENVIRONMENTAL SETTING**

This section provides information necessary to evaluate the potential impact of an environmental release to area soil, surface water, and groundwater receptors.

#### **3.1 Water Supply**

Potable water for the area is supplied by the City of Ste. Genevieve, Missouri. The total water supply comes from four wells located in the southeast quarter of the southeast quarter of Section 21 T38N R9E, within one-quarter of a mile south of the site (Figure 4). The area is identified as the Bois Brulle Bottom area (Reference 1). The four wells are capable of producing a total of 2.6 million gallons per day (Reference 49) and serve the City of Ste. Genevieve, approximately 4,480 people (Reference 63). There are no surface water intakes for drinking water production within 15 miles downstream of the site (Reference 1).

The MDNR's computerized water well database, administered by MDNR's Division of Geology and Land Survey, identified 29 wells within a four-mile radius of the site (Reference 52). Information regarding the wells is presented in Table 1. Only one of the 29 wells is described as a business-owned well (Reference 52). Twenty-six of the wells are listed as domestic use (Reference 52). It should be noted that all of the well logs obtained from the database indicate that wells were completed in the unconsolidated materials. One well is listed as a county water supply (Reference 52). The use designation for two of the wells was not available (Reference 52). The current status of wells installed prior to 1987 is unknown and is not part of the state's computerized well database. However, copies of some logs for these wells do exist (Reference 52). The wells closest to the project site appear to be the Ste. Genevieve municipal wells described above. The Ste. Genevieve municipal wells did

not show up on the database printout; however, copies of three of these well logs are provided in Appendix A. The county water supply well is located between three and four miles from the site, in Zell, Missouri. Four wells comprise the south-central portion of the county water supply. The well in Zell is one of the two main wells in the south-central system. The south-central system serves approximately 3,000 people. The well in Zell supplies approximately one-half the water for this system (Reference 63).

Wastewater from the Silvanus facility is discharged to the City of Ste. Genevieve sewer system (Reference 48). Wastewater treatment is conducted in an oxidation ditch in the Valle Spring Branch (Reference 66). The sewage lagoons which appear on the United States Geological Survey (USGS) topographic map (Figure 4) were formerly located approximately three-eighths of a mile southeast of the facility and were destroyed by a flood in 1986 (Reference 66). Total capacity for this system is 750,000 gallons per day; however, normal processing at this time is around 500,000 gallons per day (Reference 49). Treated wastewater is discharged to the Mississippi River. As discussed previously, POTW personnel indicated that they had issued no written or verbal permission to Silvanus to discharge wastewater to the municipal sewer system (Reference 66).

### 3.2 Surface Waters

The area watershed is the Mississippi River Basin (Reference 51). The MDNR further defines the drainage basin serving the Silvanus Products site as the "Upper Mississippi River Basin Below St. Louis" (Reference 51). The Soil Conservation Service (SCS) identifies the watershed area as sub-basin 050000 (Reference 51). The USGS catalogs the area as hydrologic unit 07140101 (Reference 51).

Although surface water flows generally northeasterly for the county of Ste. Genevieve as a whole, the surface water drainage pathway from the facility property is to the southeast. Surface water run-off across the site flows generally to the east through two levee culverts situated at the north and south ends of the east side of the building, and then finds its way to either the North or South Gabouri Creeks or the Valley Spring Branch. These streams join east of the city and subsequently empty into the Mississippi River approximately one mile southeast of the site (Reference 1).

### 3.3 Area Soil, Geology, and Hydrology

The Silvanus Products site is located in the Ozark Plateau physiographic province of the United States (Reference 53). Within this province, the facility is situated along the eastern edge of the Karst Plain, on which the present City of Ste. Genevieve rests, and the Mississippi River flood plain region on which "oldtown" Ste. Genevieve rests (Reference 53).

The Karst Plain is described as:

"...a band of upland about 5 miles wide extending from Frenchman Hollow southward into Perry County near St. Marys. It is bordered on the west by gradual ascent to the River Hills area and on the east by the Mississippi flood plain. It is characterized by sinkholes and sinkhole ponds. Thick loess covers the area, and the underlying bedrock is predominately limestone... Menfro soils are dominant in the Karst Plains." (Reference 53)

The Mississippi flood plain and the secondary streams and terraces accompanying this landform invariably consist of gravelly material in the upper reaches of the smaller streams (Reference 53). Downstream, the gravelly material forms continuous beds that underlie other alluvium as basal deposits (Reference 53). Deposited on the gravelly material and increasing in thickness downstream is loamy alluvium (Reference 53). Midco Bloomsdale, Ross, Haymond, and Wilbur soils formed in these materials (Reference 53). Loamy, silty, and clay alluvium was deposited on the Mississippi River flood plain. Carr, Haynie, Nameoki, and Wabash soils formed in these materials (Reference 53).

The Silvanus Products site is located on the western edge of the Haynie-Wabash-Nameoki association (Reference 53).

Wabash soils are very poorly drained and are mostly in shales farthest from the river (Reference 53). Typically, the surface soil is very dark grayish-brown silty clay about 12 inches thick (Reference 53). The subsoil to a depth of about 73 inches is very dark gray and dark gray, mottled, very firm silty clay (Reference 53). In some areas, the subsoil has thin loamy or sandy lenses (Reference 53).

The permeability of this soil is very slow, surface run-off is very slow or ponded, and available water capacity is moderate (Reference 53). Reaction is neutral or mildly alkaline throughout (Reference 53). Natural fertility is high, and organic matter content is moderate (3-4 percent) (Reference 53). The shrink-swell potential is very high (Reference 53).

Nameoki silty clay loam make up the second soil classification in this association (Reference 53). Like the Wabash soils, the Nameoki soils are poorly drained and nearly level (Reference 53). They are subject to frequent flooding unless protected by a levee (Reference 53). In most areas, the surface is ridges and shales (Reference 53). Typically, the surface and subsurface layers are very dark gray silty clay about 15 inches thick (Reference 53). The subsoil is about 20 inches thick (Reference 53). It is dark gray and dark grayish-brown, very firm silty clay in the upper part and dark grayish-brown clay loam in the lower part (Reference 53). The substratum to a depth of 70 inches or more is grayish-brown silt in the upper part and grayish-brown sand in the lower part (Reference 53). Permeability, water capacity, reaction values, organic content, and fertility are identical to the Wabash soils outlined above (Reference 53).

Haynie silt loam makes up the last soil type in this association (Reference 53). The surface layer is typically very dark grayish-brown silt loam about nine inches thick (Reference 53). The underlying material to a depth of about 60 inches is stratified grayish-brown and dark grayish-brown silt loam and brown and grayish-brown, very fine sandy loam (Reference 53). In some areas the very dark grayish-brown surface layer is more than ten inches thick. The surface layer is loam in some areas (Reference 53). There are some areas scattered through this soil type that contain more fine sand than this Haynie soil and are lighter in color (Reference 53).

The permeability of this soil is moderate, surface run-off is slow, and available water capacity is high (Reference 53). Soil pH is neutral or mildly alkaline throughout (Reference 53). Natural fertility is high, and organic matter content is moderate (Reference 53).

On a regional basis, the site lies in the western edge of the Mississippi River flood plain (Reference 60). The limestone known as the St. Louis Formation of the Meramecian Series, of the Mississippian System, comprises the upper bedrock unit in this region (Reference 54). The Meramecian Series is composed mainly

of beds of limestone and some dolomite (Reference 54). The beds are separated by relatively thin layers of blue to bluish-gray shale (Reference 54).

The St. Louis Formation is characterized by being gray and very fine crystalline (lithographic) to white and coarsely crystalline with occasional beds of oolite (Reference 60). The upper and lower parts of the St. Louis Formation are thin bedded and contain irregularly bedded chert (Reference 60). The middle portion of the formation is thicker bedded, with occasional cross bedding, brownish, dolomitic and rarely contain chert (Reference 54). In Ste. Genevieve County, the lower half of the St. Louis Formation contains an abundance of the coral *Lithostrotion proliferum* (Reference 54). The St. Louis Formation-type section is located in St. Louis County, approximately 60 miles north of the site (Reference 60). The thickest vertical expression (over 100 feet thick) is present in St. Louis County and surrounding portions of east-central and southeastern Missouri (Reference 54).

The Salem ("Spergen") Formation underlies the St. Louis Formation (Reference 54). The Salem attains its greatest thickness in the same geographical areas as the St. Louis Formation (Reference 54). The Salem can be 100 to 160 feet thick in this region (Reference 60). The Salem is a white to bluish-gray, sandy to oolitic, dolomitic limestone (Reference 60). The upper portion of the Salem is fossiliferous (Reference 54).

Bedrock groundwater at the site is classified as part of the Southeast Missouri Lowland Groundwater Province (Reference 58). These areas contain three principle aquifers: the alluvium, the Wilcox Group, and the McNairy Formation (Reference 58). The Silvanus site lies adjacent to the Mississippian River flood plain and therefore is associated with this river's alluvial aquifer. Groundwater flow in the alluvium is typically southward; however, locally, it may flow in other directions (Reference 58). Water quality from the alluvium deposits along the Mississippi River is generally very good and used primarily by municipalities as a drinking water supply (Reference 58). The dissolved solids concentration of water drawn from this formation typically ranges from 100 to 350 parts per million (ppm), and usually contains low levels of chloride, sulfate, and hardness (Reference 58). Well yield from the alluvial deposits is high and commonly range from 500 to 1,000 gallons per minute (Reference 58).

Representative well logs from area wells are included in Appendix A.

### 3.4 Area Climatology

The Silvanus Products site is near the geographical center of the United States. There are no natural topographic obstructions to prevent the free sweep of air from all directions. The influx of moist air from the Gulf of Mexico, or dry air from the semi-arid regions of the southwest, determine whether wet or dry conditions will prevail.

The National Oceanic and Atmospheric Administration records climatological data at Farmington, Missouri which lies 22 miles west-southwest of Ste. Genevieve, Missouri. The National Climatic Data Center compiled the following information for the period 1951-1990, inclusive (Reference 59).

Early spring brings a period of frequent and rapid fluctuations in weather, with the fluctuations generally less frequent as spring progresses (Reference 59). The summer season is characterized by warm days and mild nights, with moderate humidity (Reference 59). July is the warmest month (Reference 51). The fall season is normally mild and usually includes a period near the middle of the season characterized by mild, sunny days, and

cool nights (Reference 51). Winters are not severely cold (Reference 51). January is the coldest month (Reference 51). Snowfall to a depth of ten inches is comparatively rare (Reference 51). The distribution of measurable snow normally extends from November to April (Reference 51).

In the winter months of November, December, January, and February, the average temperature is 36°F. The lowest temperature recorded in 1990, which occurred on December 24, was 0°F (Reference 59). In the summer months of June, July, and August, the average temperature is 75°F (Reference 59). The highest recorded temperature in 1990 occurred on September 8. It was 96°F (Reference 59).

The average total annual precipitation is 40 inches (Reference 51). Of this, 23 inches, or 57.5 percent, usually falls in March through August (Reference 51). December through February receives only eight inches precipitation, on average (Reference 51). The maximum expected rainfall for any one day is 5.5 inches which may be expected to be exceeded every 25 years (Reference 51). The maximum expected rainfall for any ten-day period would be just under nine inches for the same 25-year period (Reference 51).

The average seasonal snowfall is twelve inches (Reference 51). Temperature significantly affects the type of winter precipitation. Influence of warm Gulf air is most pronounced as most winter precipitation falls as rain (Reference 51).

### **3.5 Critical Habitats/Endangered Species**

The Missouri Department of Conservation provided the following statement regarding threatened and endangered species within a four-mile radius of the site (Reference 56):

"The Department staff examined map and computer files for federal and state threatened and endangered species and determined that no sensitive species or communities are known to occur on the immediate site or surrounding area. The lack of records, however, does not mean that such species or communities do not exist on this tract of land. Only an on-site inspection could verify their absence or existence."

No threatened or endangered species, or high-quality natural communities, were observed on-site during the VSI.

### **4.0 VISUAL SITE INSPECTION**

The VSI of the former Silvanus Products site was performed May 19, 1992. The VSI focused on the past and present wastestreams at the facility in order to identify all SWMUs and to collect information beneficial in assessing their potential to release hazardous waste or constituents to the environment. Weather conditions at the site during the VSI were clear, with temperatures in the 70s and light to no winds.

During the VSI, two Silvanus Products representatives and two MDNR representatives accompanied the Terracon investigation team; however, during the pre-VSI and post-VSI meeting, two other Silvanus Products representatives were present. A complete list of individuals attending the VSI is presented in Section 4.1.

#### **4.1 Visual Site Inspection Participants**

The following personnel were present during the VSI:

Roger Wood  
Environmental Scientist  
Terracon Environmental, Inc.

Vernon Schwent  
Manager, Special Projects  
Silvanus Products, Inc.

Larry French  
Regulatory Compliance Specialist  
Terracon Environmental, Inc.

Urban Klein  
President  
Silvanus Products, Inc.

Gene Williams  
Environmental Engineer  
Waste Management Program  
Missouri Department of Natural Resources

Bob Rottler  
Majority Stockholder  
Silvanus Products, Inc.

Dave Freise  
Environmental Engineer  
Waste Management Program  
Missouri Department of Natural Resources

Gary Hammer  
Production Manager, Passbook Department  
Silvanus Products, Inc.

#### **4.2 Solid Waste Management Units and Areas of Concern**

Two former and ten existing SWMUs were identified at the site during the VSI. These included the old drum storage room (a former SWMU), the flammable material storage area located west of the receiving dock, the storage area for recyclable lead scrap generated in typesetting operations, two present satellite collection points for solvent/ink contaminated rags generated in the printing and silk-screening processes, the waste fixer/developer drum outside the darkroom, the Safety-Kleen parts washer in the printing area, the adhesive and antiquing spray booths, the former paper waste incinerator, and the general refuse dumpster. One AOC, the hydraulic fluid discharge from a plant air compressor, was also identified during the VSI.

All SWMUs and AOCs are described in Table 2 and summarized in Table 3. The locations of all SWMUs, past and present, were photographed with the exception of the satellite drum located in the silk-screening area and the Safety-Kleen parts washer in the maintenance room.

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3. EPA Form 8700-12B (4-80), Acknowledgement of Hazardous Waste Activity, EPA Region VII office, November 13, 1980.
4. EPA Form 3510-1 (6-80), Hazardous Waste Permit Application, Georgia-Pacific Corporation of Missouri, November 6, 1980.
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6. Letter; EPA to Georgia-Pacific Corporation, Undated, RE: Request to resubmit an amended Notification of Hazardous Waste Activity - EPA form 8700-12, August 13, 1980.
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8. Letter; Lyndell Harrington, EPA to John Doyle, Missouri Department Of Natural Resources, April 6, 1981, RE: Notice of proposed Hazardous Waste Part A permit action and conditions.
9. Certified letter; David Wagoner, EPA to Philip McKersie, Georgia-Pacific Corporation, May 27, 1982, RE: closure, post-closure and financial responsibility.
10. Letter; Lynn Harrington, EPA to Robert Schumaker, Georgia-Pacific Corporation, May 27, 1982, RE: Informing Company they may qualify as small quantity generator and be exempt from RCRA regulations.
11. Letter; Philip McKersie, Georgia-Pacific Corporation to Robert Morby, EPA, August 26, 1982, In RE: request that EPA continue processing Part A RCRA permit.
12. Georgia-Pacific Financial Responsibility Report, Cover letter; Beverly Gholson, Georgia-Pacific to EPA dated: September 27, 1982.
13. Letter; David Wagoner, EPA, to Robert Schumaker, Georgia-Pacific Corp., subject: Conditions of operation of Georgia-Pacific Corp. during interim status, October 5, 1982.
14. Letter; Brain Warsham, Georgia-Pacific Corp. to David Wagoner, EPA Region VII, October 26, 1982. RE: Request to amend Official Operator's Name and Owner's Name to read; Georgia-Pacific Corporation.

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16. Letter; Lynn Harrington, EPA to Brian Warsham, Georgia-Pacific Corporation, November 15, 1982, RE: Acknowledge Owner - Operator error and reissue corrected Terms and conditions for interim status.
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34. Letter; Daniel Tschirgi, MDNR to Urban Klein, Silvanus Products, December 6, 1991. RE: Closure Review Inspection (CRI).
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## TABLES

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TABLE 1

**Missouri Water Well Database  
Four-Mile Radius of Silvanus Products**

Reference No.	Water Use	Location	Depth
15695A	Domestic	SEC 18 38N 09E	1122
31523A	Domestic	NE¼ NW¼ SEC 26 38N 09E	810
31522A	Not reported	NW¼ SEC 26 38N 09E	160
64730A	Domestic	NW¼ NE¼ SEC 34 38N 09E	230
07724A	Domestic	38N 09E	351
15689A	Domestic	SE¼ NW¼ SEC ? 38N 08E	150
35122A	Domestic	SEC 05 38N 08E	123
64377A	Domestic	SE¼ NW¼ SEC 07 38N 08E	150
41435A	Domestic	SW¼ NE¼ SEC 09 38N 08E	130
15826A	Domestic	SEC 17 38N 08E	130
64376A	Domestic	SW¼ SW¼ SEC 17 38N 08E	170
52234A	Domestic	NE¼ NE¼ SEC 22 38N 08E	135
15827A	Domestic	SEC 25 38N 08E	520
32662A	Domestic	NW¼ SE¼ SEC 29 38N 08E	166
43351A	Domestic	SE¼ SE¼ SEC 30 38N 08E	207
15830A	Domestic	SEC 33 38N 08E	310
37962A	Public	SEC 34 38N 08E	1006
12526A	Domestic	NE¼ NW¼ SEC 35 38N 08E	780
31503A	Domestic	38N 08E	230
35098A	Not reported	SEC 17 38N 08W	130
49268A	Domestic	NE¼ SW¼ SEC 17 38N 08W	270
03347A	Domestic	NW¼ NW¼ SEC 18 38N 08W	252
33802A	Domestic	SEC 18 38N 08W	252
01045A	Domestic	SE¼ NW¼ SEC 20 38N 08W	200
41919A	Not reported	37N 09E	300
53832A	Domestic	37N 09E	240
53830A	Domestic	37N 09E	184
35103A	Domestic	37N 09E	150
06633A	Domestic	SEC 18 37N 09E	704

**TABLE 2**

**SOLID WASTE MANAGEMENT UNIT/AREA OF CONCERN DESCRIPTIONS**

<b>SWMU NUMBER:</b>	1
<b>SWMU NAME:</b>	Former drum storage area
<b>SWMU DESCRIPTION:</b>	<p>The former drum storage area is on the south side of the facility adjacent to the warehouse (Figure 3). Sixteen 55-gallon drums containing waste solvent and ink-stained rags were accumulated and stored in this room from 1980 to May 1984. The room measures approximately 15 feet by 35 feet. It was originally intended to incinerate these rags using an incinerator (SWMU Number 11) installed in this room. This plan was never implemented, and the incinerator was removed. The drums were disposed in 1984 by the former owner, Georgia-Pacific. The wastes were sent to Chemical Waste Management in Emelle, Alabama using Kies Transport (EPA Identification Number KSD980853246). Silvanus has not used this room for hazardous waste storage since the wastes were removed in 1984. According to the original EPA Hazardous Waste Part A application, this room had a storage capacity of 5,500 gallons (Reference 4).</p>
<b>DATES OF OPERATION:</b>	<p>The room was first used for waste storage in 1980 (Reference 1). Use of the room for storage discontinued in 1984 (Reference 48).</p>
<b>CLOSURE DATE:</b>	<p>A Closure Plan for the facility, which included closure procedures for this storage room, was submitted to MDNR September 1, 1982 (Reference 18). In March 1992, Silvanus Products issued a revised Closure Plan based on MDNR review of the 1982 Closure Plan submitted by Georgia-Pacific (Reference 47) (Appendix F). Final approval of this Closure Plan was granted, with modifications, on July 15, 1992. The Silvanus Closure Plan has not yet been implemented (Reference 67).</p>
<b>WASTES MANAGED:</b>	<p>Cotton rags soaked with cleaning solvents and printer inks (References 4, 32, and 48) identified as EPA waste codes F001, F003, and U002.</p>
<b>RELEASE CONTROLS:</b>	<p>No secondary containment is incorporated into room construction.</p>
<b>RELEASE HISTORY:</b>	<p>There is no record or documentation of material having been released within or from this room (Reference 48).</p>
<b>MIGRATION PATHWAYS:</b>	<p>The primary migration pathway from this SWMU would have been onto the concrete floor and into the air within the facility. A hairline crack in this flooring is noted in the revised Closure Plan (Reference 47). No drains or other outlets are present.</p>
<b>PHOTOGRAPH NOS.:</b>	9, 10.

**SWMU NUMBER:** 2

**SWMU NAME:** Flammable material storage area

**SWMU DESCRIPTION:** This is a 12-foot by 12-foot covered concrete pad located just west of the plant loading dock on the south end of the building. It is surrounded by a chain-link fence which reaches the roof and a lockable gate. Drums containing flammable material as well as waste machine oils are stored in this area (Reference 48).

**DATES OF OPERATION:** The area has been in use since it was constructed in 1990 (Reference 57).

**CLOSURE DATE:** This pad is currently used.

**WASTES MANAGED:** Waste oils from changing the oil in the air compressor twice annually are stored in this area (References 57 and 67). Oils have been accumulated since 1984 and a 55-gallon drum of waste oil has not yet been filled. However, when the drum becomes full, this waste will be handled by Safety-Kleen. Safety-Kleen will be requested to conduct the waste characterization for disposal. This material will most likely be classified as a Missouri-regulated waste oil, waste code D098.

**RELEASE CONTROLS:** Drums are kept closed.

**RELEASE HISTORY:** There is no record or documentation of material having been released within or from this area (Reference 57).

**MIGRATION PATHWAYS:** Material released in this area would migrate via soil and air pathways. Soil migration and possible water migration may be facilitated by a stormwater drainage inlet located four feet south of the storage area.

**PHOTOGRAPH NO.:** 7.

**SWMU NUMBER:** 3

**SWMU NAME:** Recyclable scrap lead storage drum

**SWMU DESCRIPTION:** This 55-gallon drum is located in the offset printing area of the plant next to the Linotype typesetter machinery (Figure 3). The drum is kept open. Full drums of lead scrap are sent to United American Metals Corporation in Chicago, Illinois for recycling. Waste lead has been recycled since 1984.

**DATES OF OPERATION:** 1984 to present (References 57, 48).

**CLOSURE DATE:** This drum is currently used.

**WASTES MANAGED:** Recycled lead scrap. During the past 18 months, Silvanus has recycled 3,460 lbs (Reference 57).

**RELEASE CONTROLS:** None.

**RELEASE HISTORY:** There is no record or documentation of material having been released within or from this area (Reference 48).

**MIGRATION PATHWAYS:** The primary migration pathway from this SWMU is to the concrete building floor. No drains or other outlets are located nearby.

**PHOTOGRAPH NO.:** 13.

**SWMU NUMBERS:** 4, 5

**SWMU NAME:** Satellite collection drums of cotton cleaning rags soaked with solvent and excess ink in each of two printing areas: the offset printing and silk-screen printing areas.

**SWMU DESCRIPTION:** The offset printing drum is located in the offset printing area (Figure 3), 20 feet from the north exterior wall and 10 feet from a west interior wall which separates this department from the plant offices. Similarly, the silk-screen drum is located in the silk-screen department, approximately 20 feet from the north exterior wall and 15 feet from the east interior wall which separates this department from the plant offices. At each silk-screen press there are two covered cans for soiled rags as well as a clean solvent can (Photograph 18). The two rag storage container system allows press operators to reuse less soiled rags and store them separately between uses in a five-gallon container (Reference 48). Once the rags become full of ink, they are discarded to the ten-gallon waste container (Reference 48). Excess ink waste produced during ink application to the press is also discarded to the large container (Reference 48). The contents of the five- and 10-gallon cans are transferred to storage in one of the 55-gallon drums in each area (Reference 48). Full drums of waste cleaning rags and excess ink are generated every six weeks and transported and incinerated by Safety-Kleen. According to waste manifests obtained from the facility (Appendix G), two 55-gallon drums containing 822 lbs. of these F003 wastes were accumulated between March 17, 1992 (the date of the previous shipment of these wastes) and April 30, 1992, a period of approximately 6 weeks. Prior to 1992, these drums were not in place, and waste rags and ink were disposed as part of the general refuse wastestream, which was transported by Tutor Refuge Service of Ste. Genevieve and disposed at the Mineral Point Landfill (References 67 and 68). According to facility representatives, prior to the off-site shipment and disposal of wastes with Safety-Kleen, wastes accumulated were small quantity hazardous wastes less than 220 lbs. per month (Reference 67).

**DATES OF OPERATION:** 1992 to present (Reference 48).

**CLOSURE DATE:** These drums are currently used.

**WASTES MANAGED:** Cotton rags soaked with cleaning solvents and printer inks, EPA waste code F003 (Reference 48). The Safety-Kleen prequalification evaluation describes this wastestream as a "paste" (Appendix H).

**RELEASE CONTROLS:** These drums are kept closed.

**RELEASE HISTORY:** There is no record or documentation of material having been released within or from this room (Reference 48).

**MIGRATION PATHWAYS:** The primary migration pathway from this SWMU would be to the concrete floor of the room. No drains or other outlets are located nearby.

**PHOTOGRAPH NO.:** 23.

**SWMU NUMBER:** 6

**SWMU NAME:** Waste fixer/developer drum

**SWMU DESCRIPTION:** Fixer and developer waste solutions are generated in three areas and collected in one 55-gallon drum which is located north of the darkroom along the west wall (Reference 48). Sources of fixer and developer waste include two gallons each of fixer and developer per month from the variotype typesetter in the office area, variable volumes of waste from the darkroom, and variable volumes of waste from the plate developer outside the darkroom. One drum of waste fixer/developer is reportedly generated every six months (Reference 48). Full drums are picked up by and disposed by Safety-Kleen. Until the end of 1991, waste fixer and developer were discharged to the sanitary sewer. Personnel at the POTW indicated that Silvanus did not receive either written or verbal permission for discharge of this wastestream to the sanitary sewer system (Reference 66).

**DATES OF OPERATION:** 1992 to present.

**CLOSURE DATE:** This unit is currently in operation.

**WASTES MANAGED:** Up to 55 gallons of waste fixer and developer solutions

**RELEASE CONTROLS:** This drum is kept closed.

**RELEASE HISTORY:** No releases from this unit are known or suspected to have occurred.

**MIGRATION PATHWAYS:** The primary migration pathway would be to the concrete floor. No drains or other outlets are located nearby.

**PHOTOGRAPH NO.:** None.

**SWMU NUMBERS:** 7, 8

**SWMU NAME:** Safety-Kleen parts washers

**SWMU DESCRIPTION:** Commercial parts washers in the printing area and the maintenance area are maintained by Safety-Kleen. Each unit is a steel wash basin on top of a 20-gallon steel drum, containing petroleum naphtha. The solvent is changed out and handled by Safety-Kleen every six weeks (Reference 48). Prior to 1992, parts washing wastes were disposed as part of the general refuse wastestream. According to Silvanus representatives, less than 220 lbs. per month of this waste were generated prior to its off-site disposal by Safety-Kleen in 1992 (Reference 67). This wastestream was originally transported by Tutor Refuge Service Company of Ste. Genevieve, Missouri to the Mineral Point Landfill (References 67 and 68).

**DATES OF OPERATION:** 1992 to present.

**CLOSURE DATE:** This unit is currently in operation.

**WASTES MANAGED:** Twenty gallons of waste petroleum naphtha (EPA waste code D001) are generated per unit.

**RELEASE CONTROLS:** These units are kept closed.

**RELEASE HISTORY:** No releases from these units are known or suspected to have occurred.

**MIGRATION PATHWAYS:** The primary migration pathway would be to the concrete floor. No drains or other outlets are located nearby.

**PHOTOGRAPH NO.:** 24.

**SWMU NUMBER:** 9

**SWMU NAME:** Adhesive spray booth

**SWMU DESCRIPTION:** The adhesive spray booth is operated in the sealing area. The adhesives used are nonhazardous hide glues. Air filters in the booth are changed as needed and are disposed as part of the general refuse wastestream. The approximately three-foot by four-foot metal booth is ventilated by a single vent in the top of the booth.

**DATES OF OPERATION:** 1992 to present.

**CLOSURE DATE:** This unit is currently in operation.

**WASTES MANAGED:** Used air filters.

**RELEASE CONTROLS:** A ventilation system controls release of overspray from the booth.

**RELEASE HISTORY:** No releases from this unit are known or suspected to have occurred.

**MIGRATION PATHWAYS:** The primary migration pathway would be to the concrete floor. No drains or other outlets are located nearby.

**PHOTOGRAPH NO.:** 29.

**SWMU NUMBER:** 10

**SWMU NAME:** Antiquing spray booth

**SWMU DESCRIPTION:** The antiquing spray booth is operated in the sealing area. The metal booth is approximately five feet long by three feet high. In 1990 and 1991 this booth was used for adhesives. Prior to 1990 and currently, the booth is used for staining, referred to as "antiquing".

**DATES OF OPERATION:** Unknown to present.

**CLOSURE DATE:** This unit is currently in operation.

**WASTES MANAGED:** Adhesives (hide glues) and stain overspray.

**RELEASE CONTROLS:** A venting system minimizes release of overspray to inside air.

**RELEASE HISTORY:** Releases from this unit have not been documented; however, releases to outside air are assumed to have occurred.

**MIGRATION PATHWAYS:** Releases from this unit would migrate to outside air.

**PHOTOGRAPH NO.:** 30.

**SWMU NUMBER:** 11

**SWMU NAME:** Former Paper Waste Incinerator

**SWMU DESCRIPTION:** The Silvanus facility began burning miscellaneous paper wastes in an incinerator formerly along the east wall of the former drum storage area (SWMU Number 1). It was installed approximately 20 years ago and removed from service approximately 10 years ago following complaints from the City of Ste. Genevieve due to nuisance air emissions (Reference 67). It burned paper and cardboard wastes as a rate of approximately ten 55-gallon drums per day.

**DATES OF OPERATION:** Approximately 1973 to 1983 (Reference 67).

**CLOSURE DATE:** Not applicable.

**WASTES MANAGED:** Nonhazardous paper wastes (Reference 67).

**RELEASE CONTROLS:** None.

**RELEASE HISTORY:** As discussed above, the City of Ste. Genevieve complained about the emissions from the incinerator and, thus, Silvanus ceased operation of the unit.

**MIGRATION PATHWAYS:** Releases of incompletely combusted paper materials from this unit would allow for the migration of nuisance pollutants to outside air.

**PHOTOGRAPH NO.:** None.

**SWMU NUMBER:** 12

**SWMU NAME:** General refuse dumpster

**SWMU DESCRIPTION:** A six-yard refuse dumpster is at the south end of the facility near the loading dock. Tutor Refuge Service Company of Ste. Genevieve, Missouri picks up the waste from the dumpster five to seven times per week. This general refuse was formerly landfilled at the Mineral Point Landfill until it was closed on May 31, 1993. These wastes are now landfilled in DeSoto, Illinois (Reference 68).

**DATES OF OPERATION:** Unknown to present.

**CLOSURE DATE:** Not applicable.

**WASTES MANAGED:** General refuse.

**RELEASE CONTROLS:** None.

**RELEASE HISTORY:** There is no record or documentation of material having been released from this dumpster (Reference 48).

**MIGRATION PATHWAYS:** Releases of general refuse would be spilled onto the gravel loading dock area.

**PHOTOGRAPH NO.:** 1.

**AOC:** A

**AOC NAME:** Air compressor oil discharge

**AOC DESCRIPTION:** The blow-off valve for the air compressor is located along the west side of the building. Due to intermittent problems with an oil leak into the air tank, oil has been mixed in with the condensation released from the blow-off valve. This has resulted in a small area of oil contamination of the soil in the vicinity of the valve.

**DATES OF OPERATION:** Unknown to present.

**CLOSURE DATE:** This valve is currently in operation.

**WASTES MANAGED:** Approximately one cubic yard of oil-contaminated soil.

**RELEASE CONTROLS:** The oil leak has been repeatedly fixed, most recently since the VSI, according to facility personnel.

**RELEASE HISTORY:** Described above

**MIGRATION PATHWAYS:** Oil contamination has migrated to soil and could further migrate to groundwater.

**PHOTOGRAPH NO.:** 8.

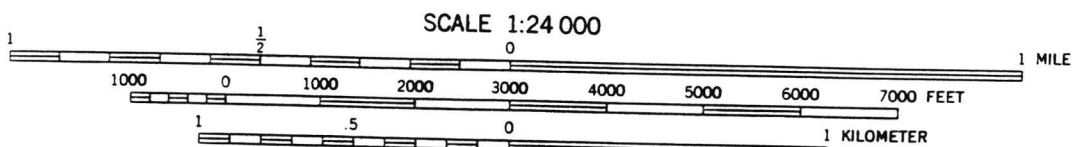
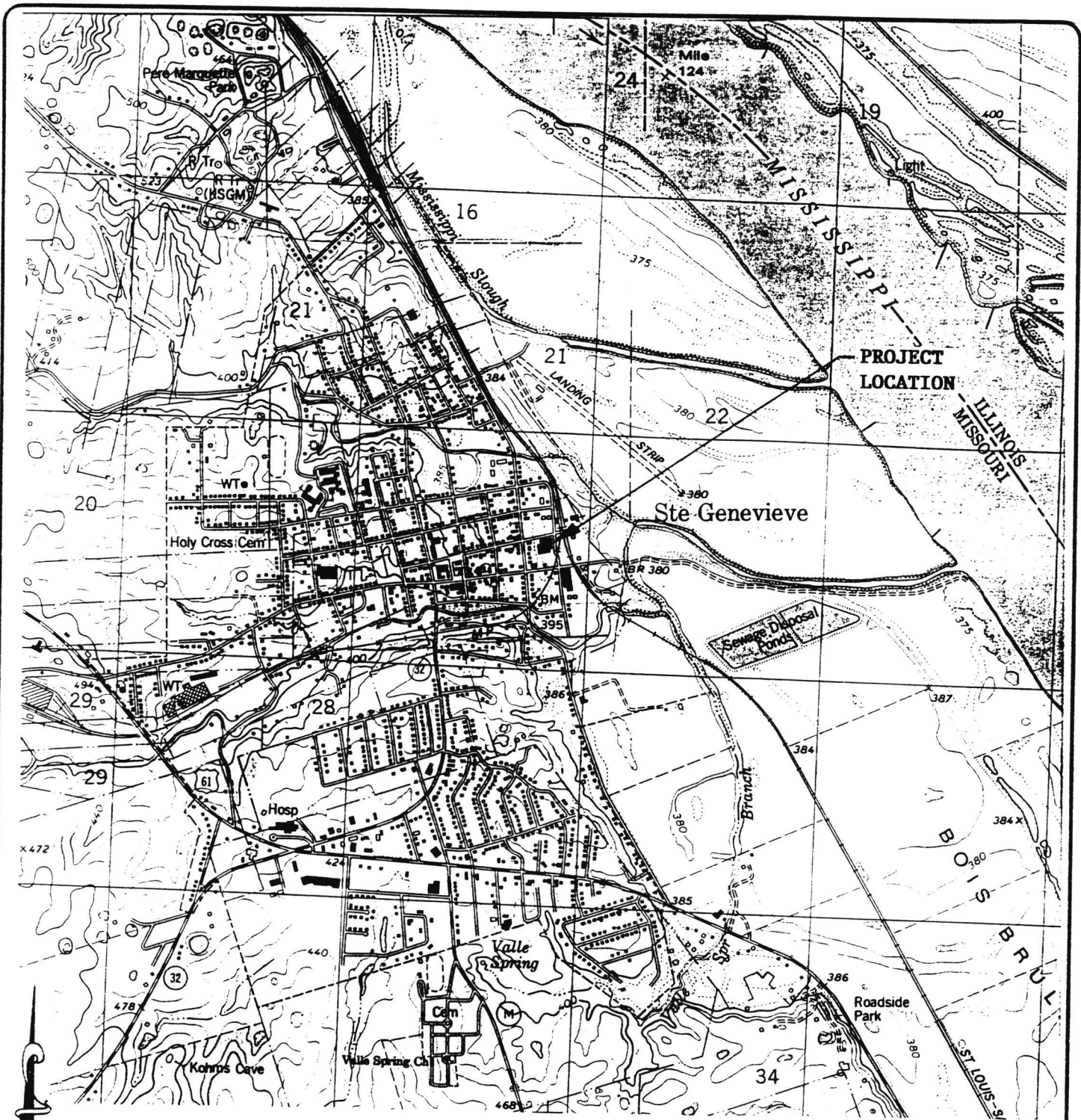
TABLE 3

**SWMU/AOC IDENTIFICATION SUMMARY**  
**Silvanus Products, Incorporated**  
**Ste. Genevieve, Missouri**  
**EPA I.D. MOD092351642**

<b>SWMU/AOC Number</b>	<b>Name of Unit</b>	<b>Years Operated</b>	<b>Wastes Managed</b>	<b>Evidence of Release</b>
SWMU 1	Former Drum Storage Room	4	Waste rags with printers ink and solvents (F001, F003, and U002)	None observed or documented
SWMU 2	Flammable Material Storage Area	2	Waste oil from facility's air compressor (probably Missouri waste code D098)	None observed or documented
SWMU 3	Recyclable Scrap Lead Storage Drum	10	Lead waste to be recycled	None observed or documented
SWMU 4	Offset Printing Satellite Collection Drum	1	Waste rags with printer's ink and solvents (F003)	None observed or documented
SWMU 5	Silk-screen Printing Satellite Collection Drum	1	Waste rags with printer's ink and solvents (F003)	None observed or documented
SWMU 6	Waste Fixer/Developer Drum	1	Waste fixer/developer (D001)	These wastes were discharged to the sanitary sewer without prior permission of the local POTW (Ref. 66)
SWMU 7, 8	Safety-Kleen Parts Washers	1	Petroleum naphtha (D001)	None observed or documented
SWMU 9	Adhesive Spray Booth	1	Used air filters (nonhazardous)	None observed or documented
SWMU 10	Antiquing Spray Booth	Unknown	Adhesives and stain overspray (nonhazardous)	None observed or documented
SWMU 11	Former Paper Waste Incinerator	10	Paper and cardboard wastes (nonhazardous)	The City of Ste. Genevieve complained about nuisance air emissions from this unit (Ref. 48)
SWMU 12	Refuse Dumpster	Unknown	General refuse	None observed or documented
AOC A	Air Compressor Oil Discharge	Unknown	Oil-contaminated soil	Oil contamination of soil observed

## FIGURES

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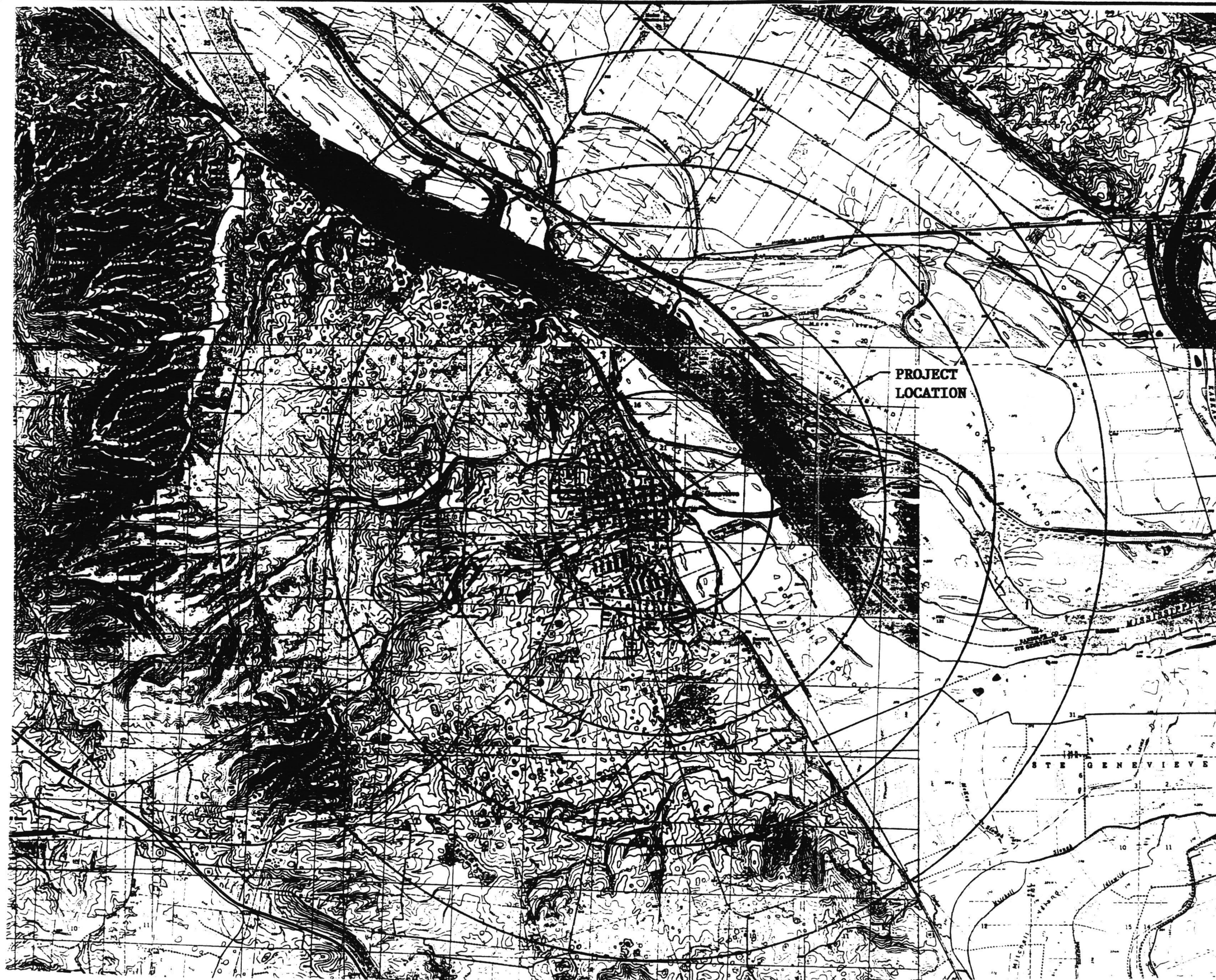


PROJ. # 50915159	CHECKED BY: RAW
SCALE: AS SHOWN	DRAWN BY:
FN: 50915159	
DATE: JUNE 10, 1992	

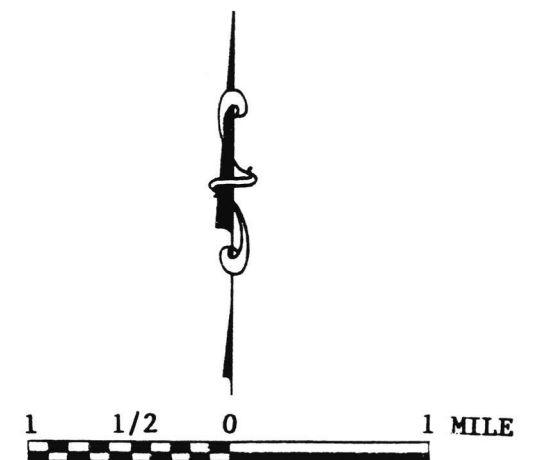
PROJECT LOCATION AND VICINITY  
 U.S.G.S. 7.5 MINUTE SERIES TOPOGRAPHIC MAP  
 STE. GENEVIEVE, MISSOURI QUADRANGLES  
 SILVANUS PRODUCTS, INC.  
 40 MERCHANT STREET  
 STE. GENEVIEVE, MISSOURI

F1

**Terracon**



REVISIONS				
NO.	DATE	DESCRIPTION	BY	CHKD. APPR.



PROJ. # 50915159

DRAWN BY:

FN: 50915159

CHECKED BY: RAW

DATE: JUNE 10, 1992

SCALE: AS SHOWN

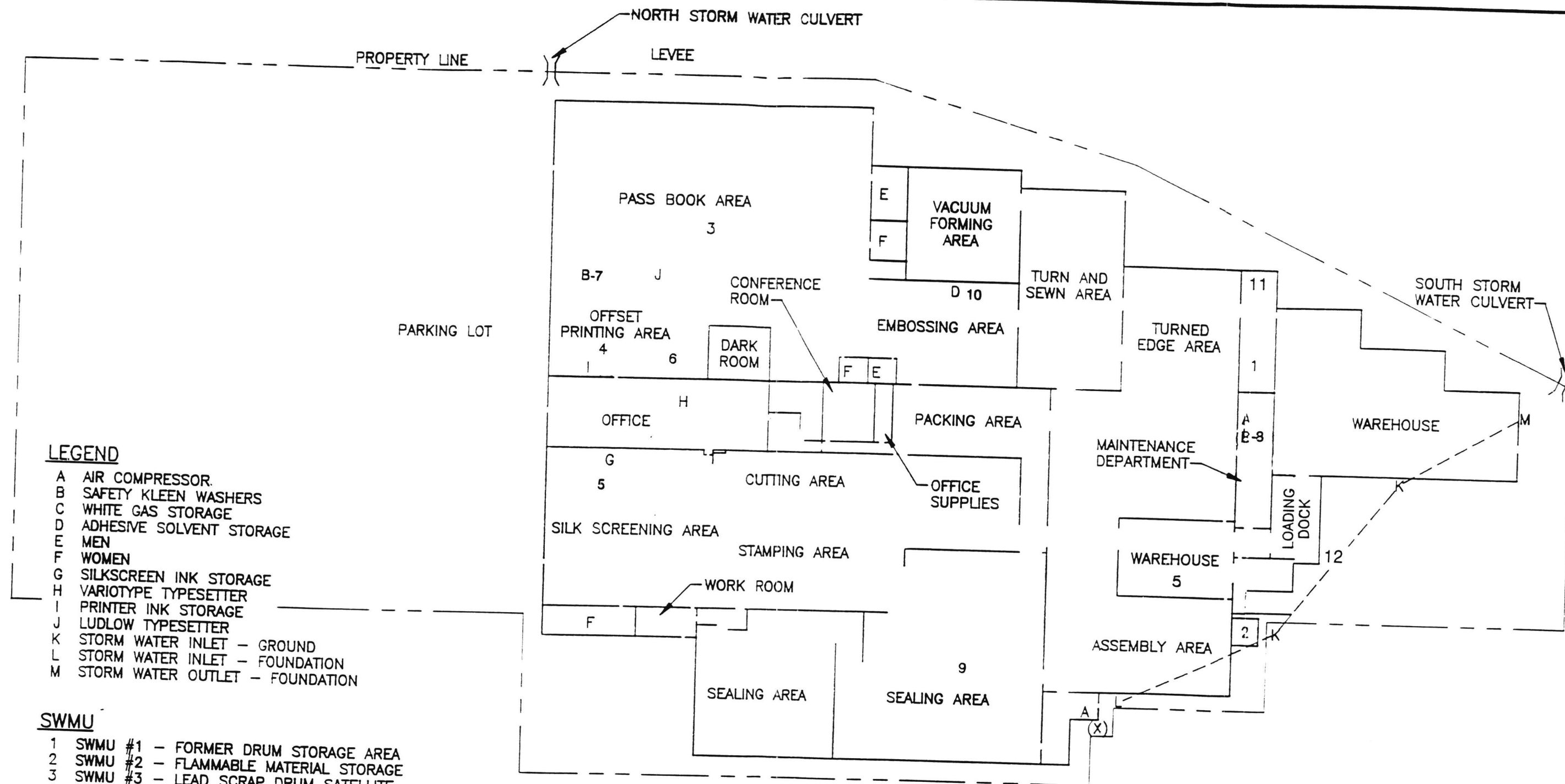
4-MILE RADIUS PROJECT LOCATION AND VICINITY  
U.S.G.S 7.5 MINUTE SERIES TOPOGRAPHICAL MAP  
STE. GENEVIEVE, KASKASKIA, EVANSVILLE  
AND PRAIRIE DU ROCHER QUADRANGLES

SILVANUS PRODUCTS, INC.  
40 MERCHANT STREET  
STE. GENEVIEVE, MISSOURI

7810 NORTHWEST 100th  
KANSAS CITY, MISSOURI 64153  
PHONE: (816) 891-7717  
FAX: (816) 891-7048

**Terracon**  
ENVIRONMENTAL, INC.

**F2**



# **LEGEND**

- A AIR COMPRESSOR.
- B SAFETY KLEEN WASHERS
- C WHITE GAS STORAGE
- D ADHESIVE SOLVENT STORAGE
- E MEN
- F WOMEN
- G SILKSCREEN INK STORAGE
- H VARIOTYPE TYPESETTER
- I PRINTER INK STORAGE
- J LUDLOW TYPESETTER
- K STORM WATER INLET - GROUND
- L STORM WATER INLET - FOUNDATION
- M STORM WATER OUTLET - FOUNDATION

## **SWMU**

- 1 SWMU #1 - FORMER DRUM STORAGE AREA
- 2 SWMU #2 - FLAMMABLE MATERIAL STORAGE
- 3 SWMU #3 - LEAD SCRAP DRUM SATELLITE
- 4 SWMU #4 - DRUM STORAGE SATELLITE AREA - OFFSET PRINTING

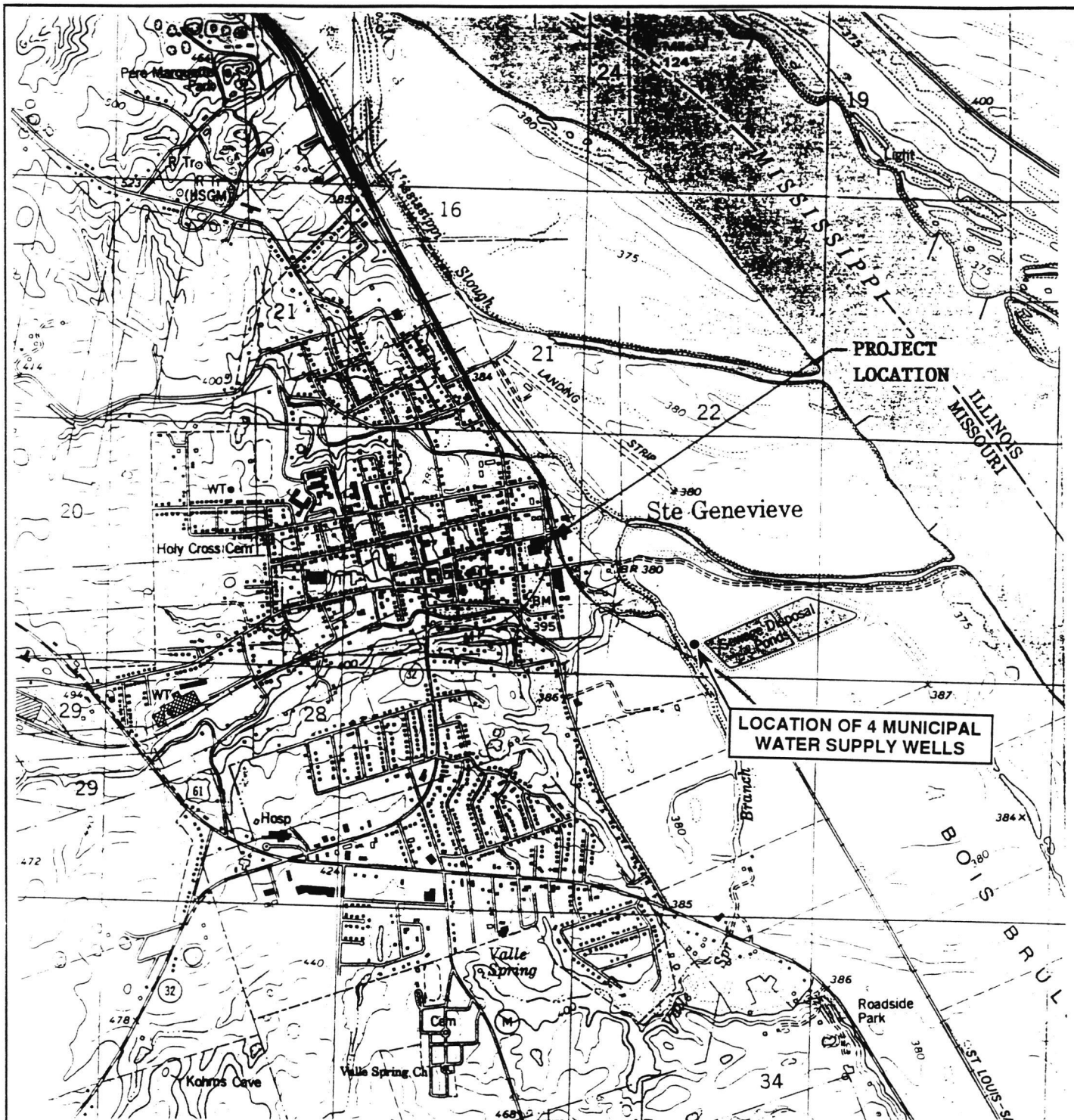
## **AOC**

- (X) AOC A - AIR COMPRESSOR DISCHARGE

- 5 SWMU #5 - DRUM STORAGE SATELLITE AREA - SILKSCREEN PRINTING
- 6 SWMU #6 - WASTE FIXER / DEVELOPER DRUM
- 7 SWMU #7 - SAFETY-KLEEN PARTS WASHER - PRINTING AREA
- 8 SWMU #8 - SAFETY-KLEEN PARTS WASHER - MAINTENANCE AREA
- 9 SWMU #9 - ADHESIVE SPRAY BOOTH
- 10 SWMU #10 - ANTIQUING SPRAY BOOTH
- 11 SWMU #11 - FORMER PAPER WASTE INCINERATOR
- 12 SWMU #12 - REFUSE DUMPSTER



FIGURE DESCRIPTION: SITE PLAN		WORK ASSIGNMENT NO. 47-7JZZ
SITE NAME/LOCATION SILVANUS FACILITY STE. GENEVIEVE, MO		JACOBS PROJECT NO. 12-D247-19
<b>JE JACOBS ENGINEERING GROUP INC.</b>		<b>ARCS</b>
DRAWN BY: MD	DATE: 09/28/93	FIGURE NO. <b>3</b>
CHECKED BY: SD	DATE: 09/28/93	



QUADRANGLE LOCATION

Source: Terracon



FIGURE DESCRIPTION:

LOCATION OF MUNICIPAL WATER  
SUPPLY WELLS

WORK ASSIGNMENT NO.

47-7JZZ

SITE NAME/LOCATION

SILVANUS FACILITY  
STE. GENEVIEVE, MO

JACOBS PROJECT NO.

12-D247-19

**JE** JACOBS ENGINEERING  
GROUP INC.

**ARCS**

DRAWN BY:

MD

DATE:

09/28/93

FIGURE NO.

**4**

CHECKED BY:

SD

DATE:

09/28/93

## **APPENDIX A**

---

### **Well Logs**

DRILLER FLYNN DRILLING SERVICES  
TROY MO. 63379

ENGINEER HUDWALKER AND ASSOC.

ANALYSIS BY BILL SCHAFER  
DATE February 26, 1992

JOB NAME TEST HOLE #1

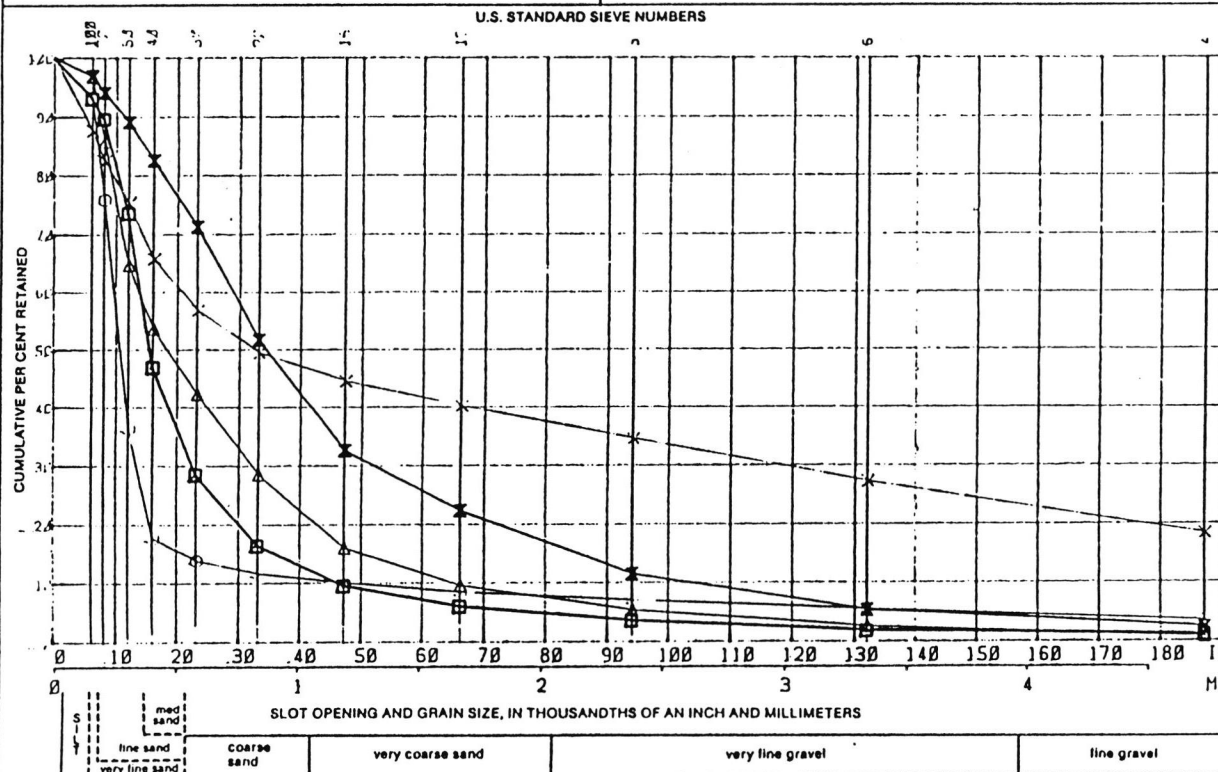
LOCATION STE GENEVIEVE  
MO.

JOHNSON I.D. NUMBER 92057  
SAMPLE SENT IN BY FLYNN DRILLING CO.

## SAND ANALYSIS REPORT



**Johnson Filtration Systems Inc.**  
World Leader through Talent & Technology™  
P.O. Box 64118 • St. Paul, Minnesota 55164-0118  
612-636-3900 • 1-800-VEE-WIRE • FAX 612-636-3171



COMBINED SAMPLE DEPTHS	PHYSICAL SAMPLE DESCRIPTION	mm Inches U.S. Sieve #	4.76	3.36	2.38	1.68	1.19	.840	.590	.420	.297	.210	.149	.074	.053	TOTAL WT.	DIAMETER		
			.187	.125	.094	.066	.047	.033	.023	.016	.012	.008	.006	.003	.002		SLOT	LENGTH	SETTING
			4	6	8	10	16	20	30	40	50	70	100	200	270				
49-51	○ SILT TO COARSE SAND	CUMULATIVE % RETAINED	3.4	5.4	6.9	8.4	10.0	11.5	13.8	17.6	36.4	75.9	93.1			261.8			
59-61	□ SILT TO VERY COARSE SAND		1.1	1.8	3.6	6.8	9.8	16.4	28.5	47.8	73.7	89.7	93.2			281.8			
64-66	Δ SILT TO VERY COARSE SAND		8.7	2.5	5.3	9.6	16.8	28.5	42.3	53.7	64.8	85.8	96.8			281.8			
74-76	× SILT TO FINE GRAVEL 9.92 3/8 IN. OR GREATER.		2.2	5.2	11.4	22.2	32.5	51.6	71.2	82.4	89.8	94.8	96.8			535.8			
74-80	× SILT TO FINE GRAVEL 231 5/8 IN. OR GREATER.		18.1	22.8	34.4	40.8	44.4	49.3	56.7	65.6	75.2	82.2	87.4			278.8			

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS.

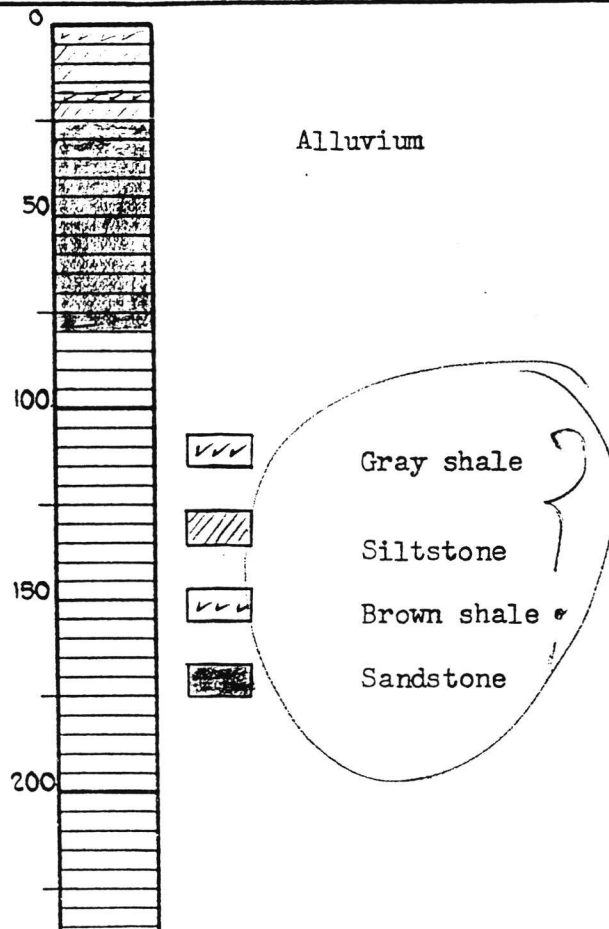
~~110-371~~

MISSOURI BUREAU OF GEOLOGY & MINES, ROLLA, MO.

MO SURVEY NO 13471		OWNER Citizens Electric Corp.																
COUNTY Ste. Genevieve		FARM	WELL NO															
T 38N	R 9E	DRILLER Jungmann Bros.																
		DATE 1955?																
<table border="1"> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </table>																	ELEVATION	PRODUCTION 1000 GPM, 14' DD
SAMPLES STUDIED Knight 5/4/55																		

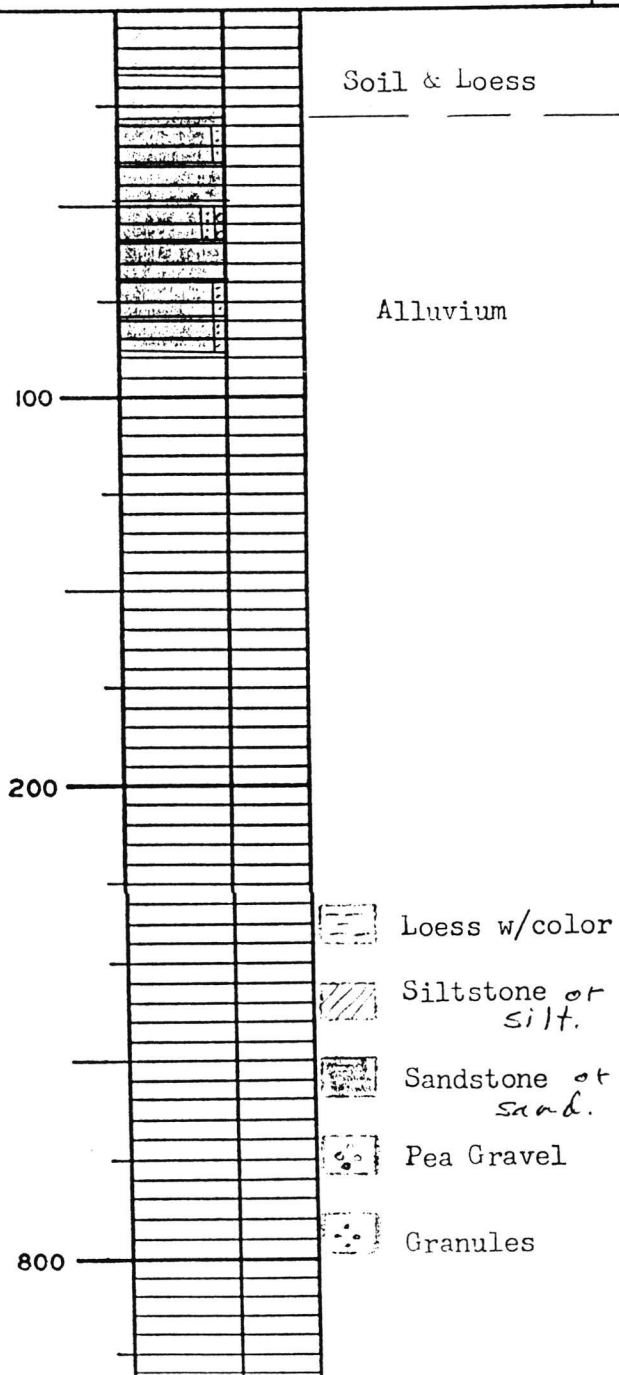
REMARKS

Samples caught every 2 feet. 16" csg  
SWL 40'.



STATE OF MISSOURI  
DIVISION OF  
GEOLOGICAL SURVEY AND WATER REOURCES

LOG NO. 24111		OWNER City of Ste. Genevieve																	
COUNTY Ste. Genevieve		FARM	WELL NO.																
T 38	R 9E	DRILLER <u>Jungman Bros. Drlg. Inc.</u>																	
		DATE <u>8/20/65</u>																	
<table border="1" style="width: 100px; height: 100px; margin: auto;"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																		ELEV.	PROD.
LOGGED BY J. Wells 8/65		INDEX SHEET NO. _____																	
REMARKS																			



## **APPENDIX B**

---

### **Photo Log**

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #1

Photographer: RAW

Date: 5-19-92

Direction: North  
(facing)

Description: South end of  
Building (Loading Dock).



Photo #2

Photographer: RAW

Date: 5-19-92

Direction: East  
(facing)

Description: South storm water  
culvert through east levee.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #3

Photographer: RAW

Date: 5-19-92

Direction: Northeast  
(facing)

Description: East border levee.  
Silvanus Products on left.

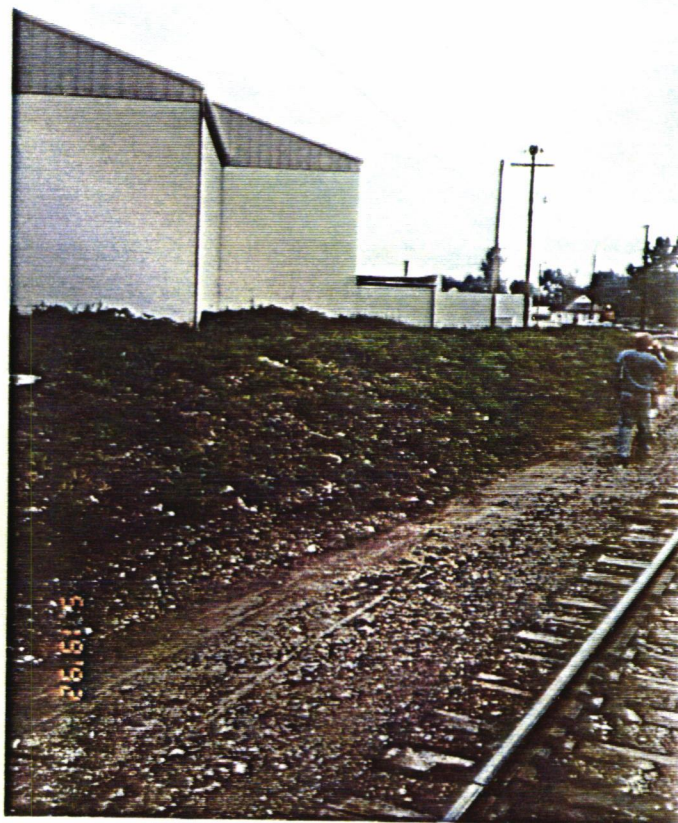


Photo #4

Photographer: RAW

Date: 5-19-92

Direction: East  
(facing)

Description: North storm water  
culvert through east levee.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #5

Photographer: RAW

Date: 5-19-92

Direction: South  
(facing)

Description: North end of  
Silvanus Products plant and  
parking lot.



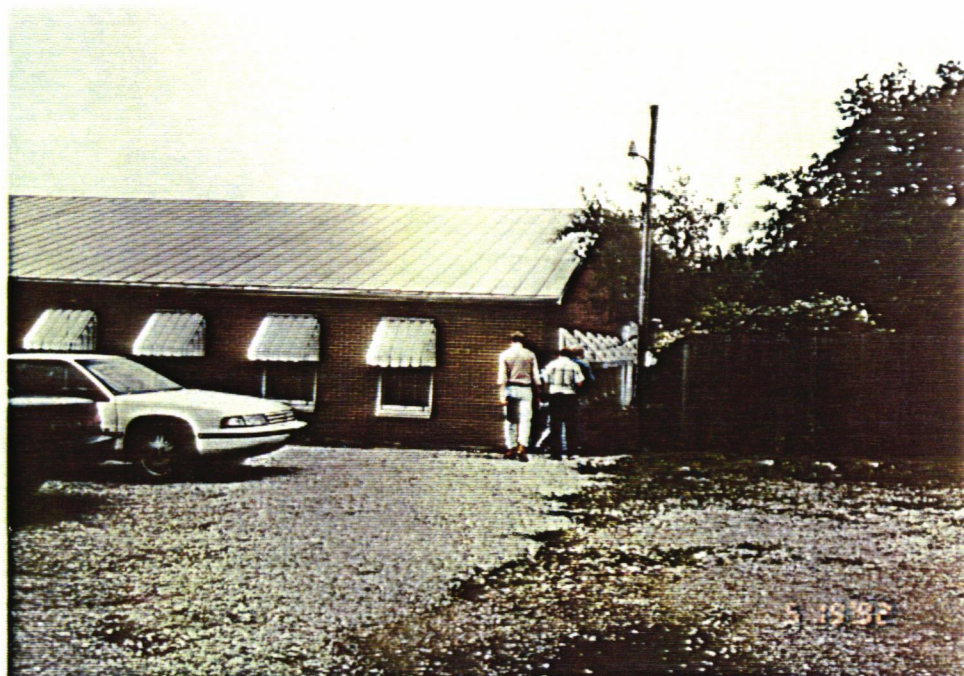
Photo #6

Photographer: RAW

Date: 5-19-92

Direction: South  
(facing)

Description: Western boundary  
of subject site.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #7

Photographer: RAW

Date: 5-19-92

Direction: North  
(facing)

Description: Flammable  
material storage area (SMWU  
#2). Note: Storm water drain  
in lower left hand corner. Note:  
No containment.



Photo #8

Photographer: RAW

Date: 5-19-92

Direction: East  
(facing)

Description: Air compressor oil  
discharge along west side of  
building. Note: storm water  
drainage on right and  
downgradient of discharge  
(AOC-A).



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #9

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Original drum  
storage room (SMWU #1).

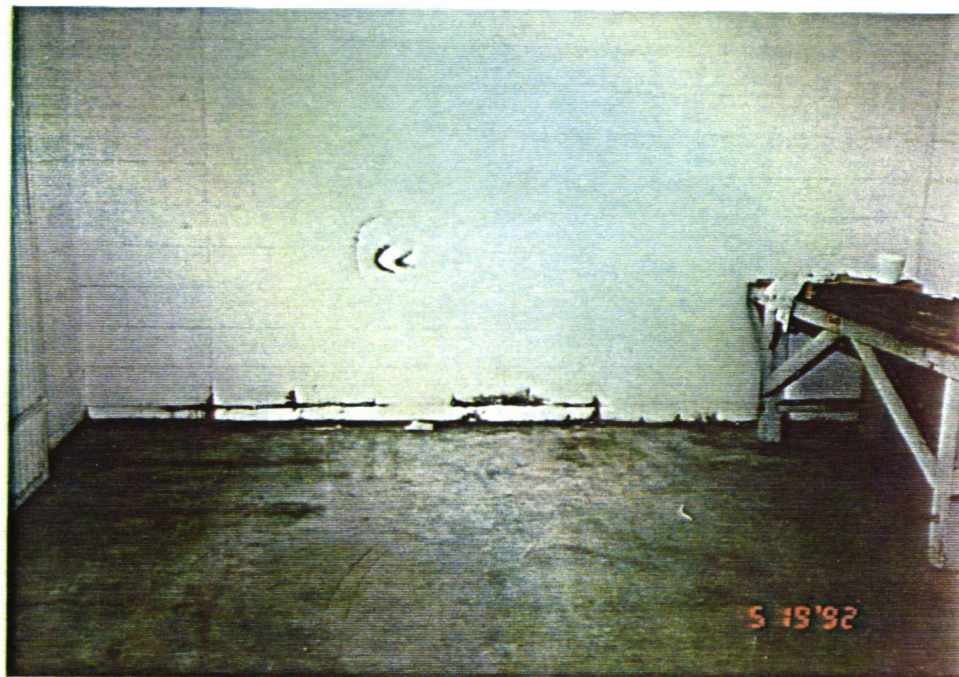


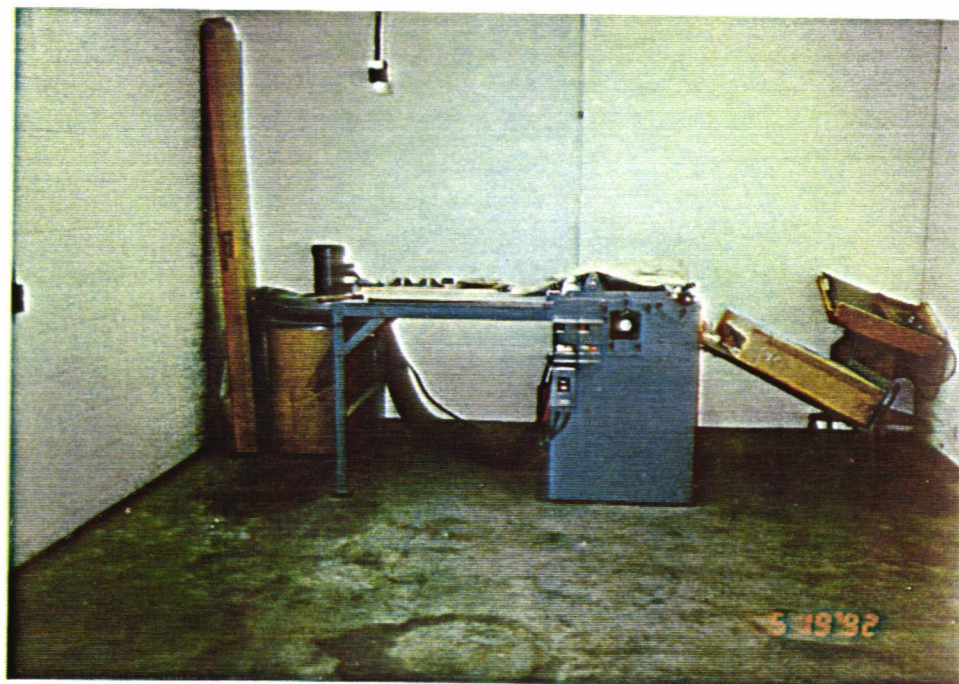
Photo #10

Photographer: RAW

Date: 5-19-92

Direction: N/A  
(facing)

Description: Original drum  
storage room (SMWU #1).



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #11

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Thirty pound lead  
ingots used in typesetting  
operation.

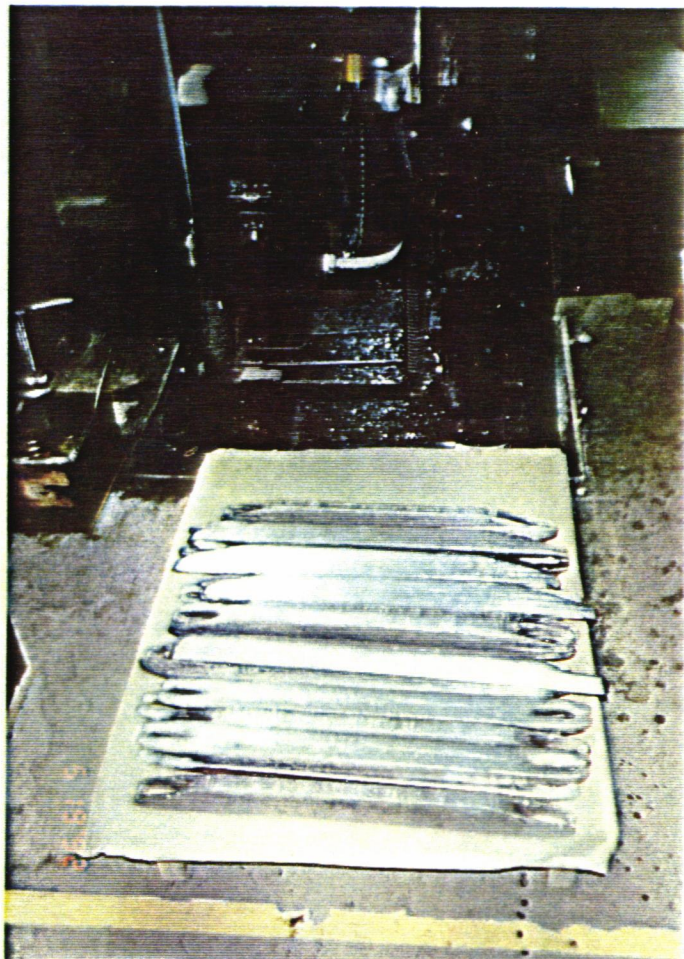


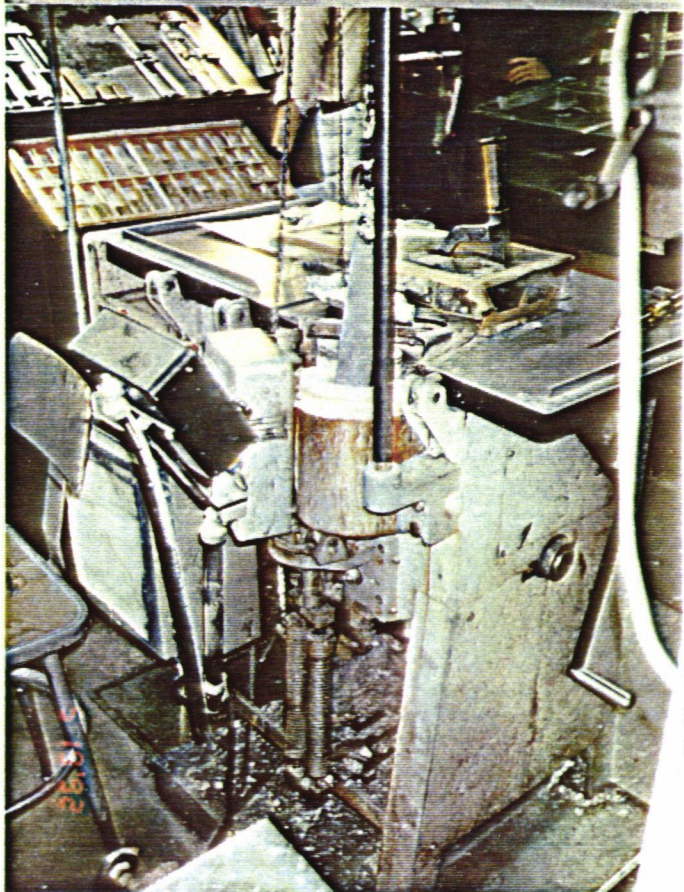
Photo #12

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Ludlow typesetter  
used to make lettering for  
printing presses. Note: lead  
waste on floor.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #13

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Lead waste drum  
used to collect recyclable lead  
(SMWU #3).



Photo #14

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Silk screen ink  
storage. Note: small  
flammable material cabinet  
under pilot lit gas furnace. No  
outside vent for cabinet.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #15

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Flammable  
material storage cabinet in silk  
screen area (see Photo #14).



Photo #16

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Small individual  
station canisters for distribution  
of flammable solvents used in  
silk screen area.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #17

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Silk screen ink mixing/preparation table. Satellite silk screen drum (SMWU #4) used to store soiled rags is nearby (less than 10 feet).



Photo #18

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Individual station canisters to hold soiled rags. Contents of large canister transferred to satellite silk screen drum nightly. Contents of smaller canister reused until heavily soiled; then transferred to larger canister for disposal. Waste ink is also disposed of into larger canister.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #19

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Silk screen wash  
area, wastewater is discharged  
directly to POTW.



Photo #20

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Offset printing ink  
storage and preparation table.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #21

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Additional offset  
printer ink storage.

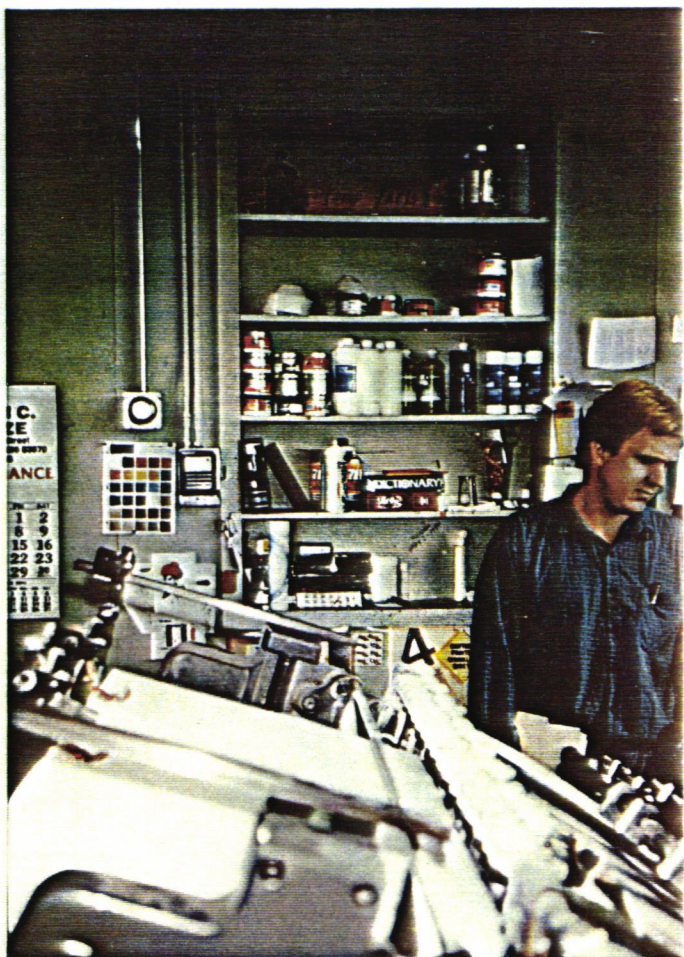


Photo #22

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Typical offset  
printer. Note: wastewater and  
individual solvent dispenser.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #23

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Satellite drum  
located in offset printing area.  
Similar drum located in silk  
screening department  
(SWMU #4).



Photo #24

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Safety Kleen parts  
washer located in offset printing  
department. Similar station  
located in building maintenance  
room (SWMU #7).



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #25

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Type-wash  
storage. Material used in offset  
printing department

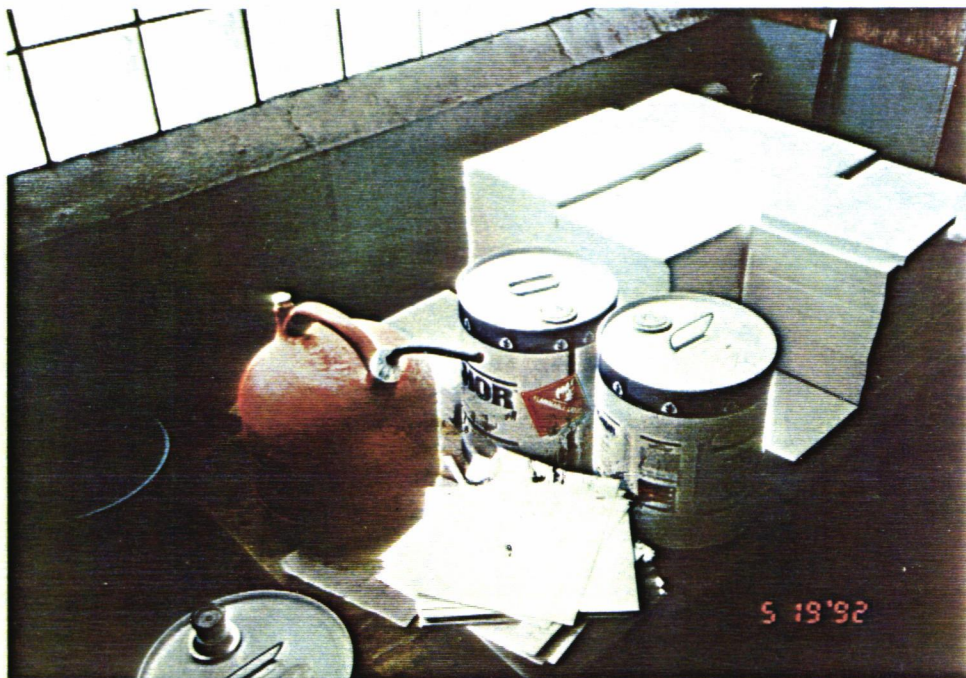


Photo #26

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Cabinet storage  
area adjacent to adhesive  
solvent storage. Cabinet is not  
fire-proof rated.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #27

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Flammable  
adhesive storage area.

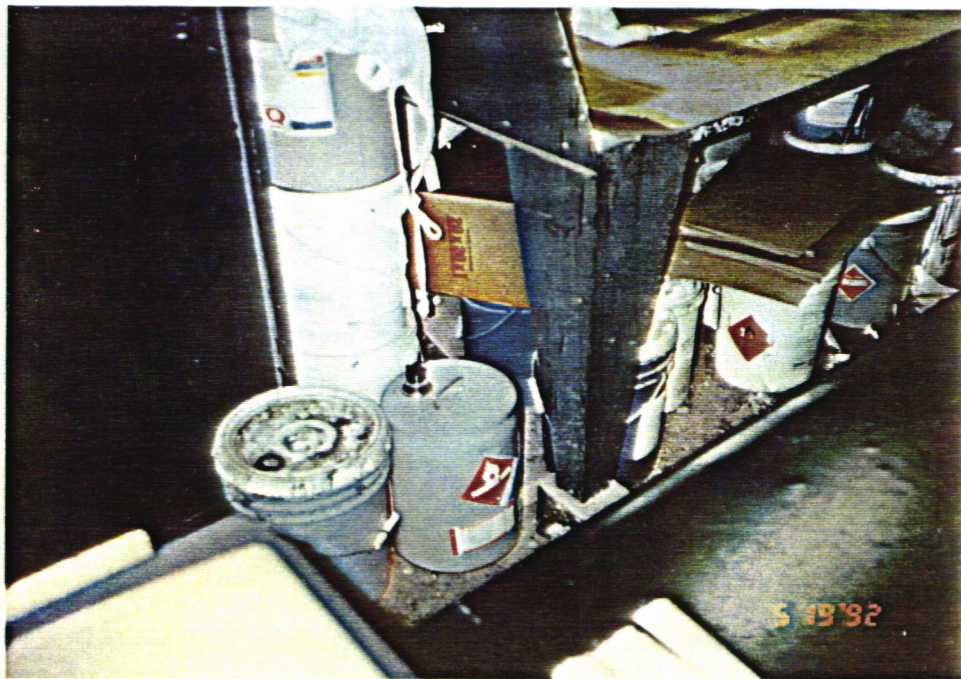


Photo #28

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: White gas storage  
area.



Terracon

EPA/PA Report  
Silvanus Products  
Project No. 10-D247-18

Photo #29

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Adhesive spray booth (SWMU #9).

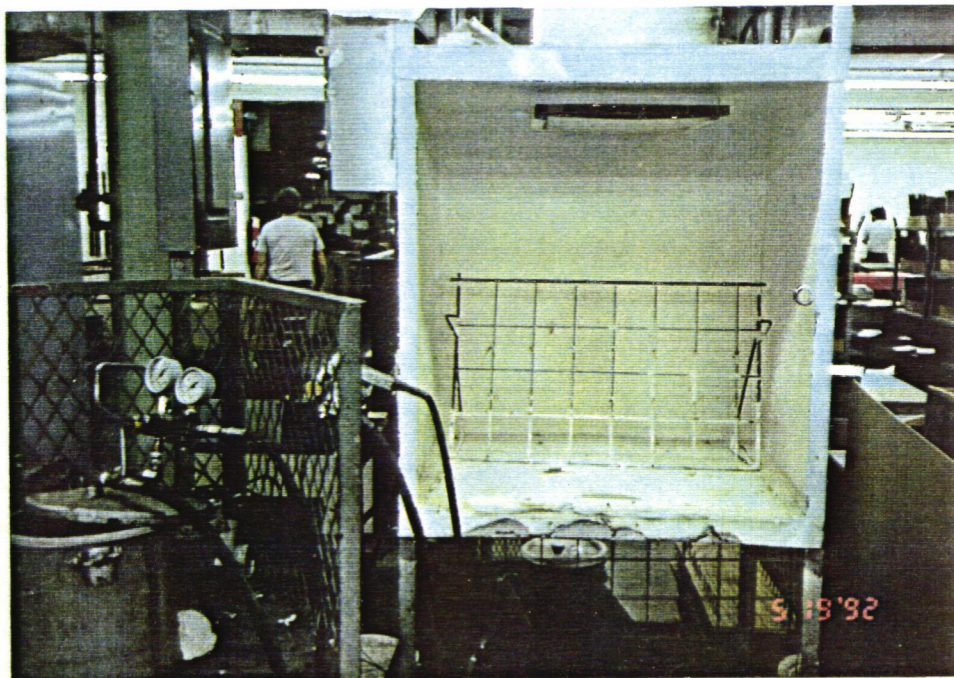


Photo #30

Photographer: RAW

Date: 5-19-92

Direction: N/A

Description: Antiquing spray booth (SWMU #10).



Terracon

## **APPENDIX C**

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### **Missouri Department of Natural Resources 1989 Compliance Evaluation Inspection Report**

RESOURCE CONSERVATION AND RECOVERY ACT  
AND  
MISSOURI HAZARDOUS WASTE MANAGEMENT LAW  
COMPLIANCE EVALUATION INSPECTION REPORT

FACILITY

Silvanus Products Incorporated  
40 Merchant Street  
Ste. Genevieve, MO 63670  
(314) 883-3521

EPA ID: None  
MO Generator: None  
Former Georgia-Pacific ID  
MOD092351642 has been assigned

PARTICIPANTS

Department of Natural Resources

Mr. Albert R. Wampler  
Environmental Engineer II  
Southeast Regional Office

Silvanus Products Incorporated

Mr. Urban Klein  
Vice President, Sales Mgr.

INTRODUCTION

On December 20, 1989, Albert R. Wampler, representing the Missouri Department of Natural Resources, Southeast Regional Office, conducted an inspection of the Silvanus Products, Incorporated facility located in Ste. Genevieve, Missouri. The inspection was conducted to determine compliance of the facility with the Resource Conservation and Recovery Act, the Missouri Hazardous Waste Management Law, and applicable state and federal regulations promulgated thereunder. Authority to conduct such inspections has been granted under sections 260.375(9) and 260.377, RSMo.

FACILITY DESCRIPTION

Silvanus Products, Incorporated has been classified by the Department of Natural Resources as being a treatment, storage and disposal facility. The facility is located in downtown Ste. Genevieve. The facility has been at their present location since the formation of the Silvanus Products, Incorporated facility in May of 1984. Before this date, the building housed the Georgia-Pacific Corporation facility processes. During May 1984 a group of employees and investors purchased the subject facility Georgia-Pacific, Ste. Genevieve, changing the name to Silvanus Products, Incorporated.

Silvanus Products, Incorporated manufactures loose leaf vinyl products, decorative and plain such as notebook binders, menu covers,

and checkbook covers. Also, some paper products and bank books for recording loan payments, are manufactured.

The facility generates one (1) waste stream that being ink cleaning rags and a few solvent cleaning rags, which are generated in a quantity less than 220 pounds per month. The rags are generated at the silk screening and off-set printing operations where they are used for cleaning the equipment. Since these rags are not generated in the amount of a quantity of hazardous waste requiring registration, they are transported to the sanitary landfill for disposal. The facility incorporates a very small amount of ignitable solvent and ink, used for printing on the vinyl covers as raw materials. Due to the fact Silvanus generates only the above mentioned waste, the appropriate classification would be a conditionally exempt small quantity generator.

#### UNSATISFACTORY FEATURES

The following unsatisfactory features list the regulatory or statutory provisions which Silvanus Products, Incorporated was in violation of at the time of the inspection. All 40 CFR regulations cited have been adopted by reference in the Missouri Hazardous Waste regulations.

Silvanus Products, Incorporated has not submitted documentation to the Department of Natural Resources showing that the facility status changed from the treatment, storage and disposal classification held by the former facility Georgia-Pacific. (Although the inspection results revealed that Silvanus Products, Incorporated is now operating as a conditionally exempt small quantity generator, from a departmental view point, the facility is in violation of all major facility requirements concerning interim status, TSD regulations). A waste analysis plan, closure plan, personnel training program, contingency plan etc., as stated in 40 CFR 265, is required. No facility closure plan has been approved and implemented. No Part B application has been filed to obtain a TSD facility permit.

#### COMMENTS

Mr. Urban Klein, Vice President, Sales Manager, acted as the facility representative during the inspection. Appropriate credentials were presented by the inspector and an explanation given as to the purpose of and the authority to conduct the inspection. Mr. Klein was informed of the facility's rights to confidentiality. An explanation was given during the initial conference as to how the inspection

would be conducted. Mr. Klein was informed that possible photographs and copies of documentation would be required.

A request was made for a visual inspection of the facility to determine which waste streams were generated, and at what point in the manufacturing process the wastes were generated. It was observed that vinyl was received at the facility in large quantities and colors. The vinyl was cut to size, depending upon the product to be manufactured. Once cut to size and formed, the vinyl was printed with appropriate letters or business names and stocked for shipment. Printing and silk screening process equipment require cleaning periodically, and these were noted as being the only waste generation points. A few rags were observed in containers near these points. There was no liquid waste observed anywhere in the building. Some scrap vinyl and paper products were generated, also being transported to the landfill for disposal. The facility did not have any hazardous waste storage area designated, due to nature of wastes generated.

After the facility visual inspection, Mr. Klein and the inspector returned to his office. Since no hazardous waste had been manifested off-site since June 21, 1984, the facility had no records to be examined. Mr. Klein was informed by the inspector that the facility was operating as an exempt small quantity generator at the present time. Mr. Klein was also informed that should the facility begin generation of wastes or accumulation of wastes greater than 220 lbs in any month, generator registration would become required along with compliance with 40 CFR Part 262. Mr. Klein was informed that departmental records indicated that Silvanus Products, Incorporated was classified as a treatment, storage, and disposal facility, and that it would be their facility's responsibility to resolve this matter, so as to assure proper classification. To resolve this issue, documentation of implementation of closure must be submitted and department approval of the closure obtained. Department records of Georgia-Pacific's TSD notification indicate several 55 gallon containers were stored at the site and the plant layout diagram and supporting documentation indicated an on-site incinerator. Both the drum storage and the incinerator must be resolved to return to compliance.

#### RECOMMENDATIONS

The recommendations listed below are for your facility's use as guidelines for implementation of corrective actions. It will be the responsibility of Silvanus Products, Incorporated to implement specific corrective actions and satisfactorily document them to

demonstrate a return to compliance with the hazardous waste laws and regulations.

We recommend Silvanus Products, Incorporated secure proper documentation and submit to the Department of Natural Resources, copies of such documentation, which will support that Silvanus Products, Incorporated is not and should not be classified as a treatment, storage, and disposal facility. Copies of documentation should be sent to both the Department of Natural Resources, Waste Management Program, Attn: Arthur Groner, Hazardous Waste Enforcement, P.O. Box 176, Jefferson City, MO 65102 and Department of Natural Resources, Regional Administrator, Southeast Regional Office, P.O. Box 1420, Poplar Bluff, MO 63901. Documentation of the TSD facility closure for the container storage and the incinerator interim status facilities should be submitted for Department review and approval to Mr. Dan Tschirgi, P.O. Box 176, Jefferson City, MO 65102.

#### ADDITIONAL COMMENTS

From a complete review of inspections of the Silvanus Products, Incorporated facility, since their purchase of the Ste. Genevieve Georgia-Pacific Company operations, in May of 1984, it is apparent that Silvanus is not a treatment, storage, or disposal facility. Georgia-Pacific did retain "generator" and "interim status TSD" ID numbers. Georgia-Pacific had registered their ink contaminated and solvent contaminated rags as a hazardous waste in April of 1983. At the time of the purchase and formation of Silvanus, in May 1984, Georgia-Pacific had remaining on the site sixteen (16) drums of ink and oil soaked rags. These drums were transported off the site by Kies Transport of Kansas City, KS (KS D980853246) to Chemical Waste Management, Incorporated, Emelle, Alabama facility (AL D000622464) on June 21, 1984. Georgia-Pacific was listed as the generator on the manifest. This was during the transition.

A letter dated May 25, 1984, to Director, David E. Bedan, Waste Management Program, from Mr. Saul J. Furstein, Senior Environmental Engineer for Georgia-Pacific, advised the Department of Natural Resources of the purchase of the subject facility, Georgia-Pacific, by Silvanus Products, Incorporated. In that letter, Mr. Furstein requested that the generator number and interim status be transferred to the Silvanus facility. Mr. Phil McKersie was said to be the new facility contact person. On May 29, 1984 Mr. Phil McKersie, President, of the newly formed facility contacted Mr. David E. Bedan, Director, Waste Management Program, and informed his office that Silvanus would not be generating or storing hazardous waste as

outlined by RCRA regulations, and it would not be necessary to transfer the ID numbers. Also, it was stated that should the ID numbers already be transferred, that they be deleted. A copy of the original notification of hazardous waste registration was found in this office's files for Georgia-Pacific stamped "DELETED", ID number MOD092351642. There is no record on file showing that Silvanus Products, Incorporated registered as a hazardous waste generator. This would be substantiated by the information contained in Mr. Phil McKersie's letter dated May 29, 1984. Also, it was found that Georgia-Pacific submitted a closure plan in September of 1982, for the Ste. Genevieve facility. In a letter to Mr. Phillip McKersie, of the Georgia-Pacific Corporation, dated March 30, 1984 from Wolfgang A. Scheucher, Waste Management Program, a request was made for additional information concerning the "Closure Plan Cost Review". An amended closure plan was requested on that date, to be submitted by Georgia-Pacific, within sixty days. No further correspondence was noted concerning this matter.

From information gathered from the Southeast Regional Office files, it is evident that the Silvanus Product, Incorporated facility was formed as a separate entity from Georgia-Pacific. Silvanus Products, Incorporated did not register and did not expect to generate greater than 220 pounds of hazardous wastes. The results of previous RCRA inspections of Silvanus and this most recent inspection, clearly demonstrates that Silvanus Products, Incorporated is not a TSD facility, and falls into the category of a conditionally exempt small quantity generator.

It was observed from departmental files that Georgia-Pacific submitted a closure plan. Evidence of follow through of Georgia-Pacific can not be verified. Deletion of the generator EPA ID number MOD09235642 for Georgia-Pacific was stamped and located in the files. The reason for Silvanus retaining the ID for Georgia-Pacific has not been explained from data found in the files. It is possible the Department of Natural Resources did not receive proper closure for the Georgia-Pacific Company and are therefore regarding the Silvanus Products facility to be the identical facility with only a name change.

SUBMITTED BY:

*Albert R. Wampler*

Albert R. Wampler  
Environmental Engineer II

ARW/RLR/sw

APPROVED BY:

*Rick L. Roberts*

Rick L. Roberts, P.E.  
Environmental Engineer III

Date: DECEMBER 20, 1989

Other Inspection: Done:  
RR\_\_\_\_\_ TRANS\_\_\_\_ LDR\_\_\_\_  
OTHER

Other Inspection: Done:  
RR\_\_\_\_\_ TRANS\_\_\_\_ LDR\_\_\_\_  
OTHER

EPA ID# NONE-FORMER MODO9235/642  
GEORGIA-PACIFIC COMPANY NL

Title: VICE PRESIDENT, SALES MGR

SILVANUS PRODUCTS, INCORPORATED IS A MANUFACTURER OF LOOSE-LEAF VINYL PRODUCTS, SUCH AS NOTE-BOOK BINDERS, CHECKBOOK COVERS, AND A FEW PAPER PRODUCTS LIKE LOAN PAYMENT BOOKS. THE FACILITY RECEIVES VINYL CUTS TO SHAPE AND EMPLOYER SILK SCREEN AND PRINTING TO LABEL AND DECORATE THE VINYL PRODUCTS

	Waste	Amount/Month	Disposition
1.	NO REGULATED QUANTITY OF ANY WASTE IS GENERATED		
2.	INK AND SOLVENT CONTAMINATED RAGS USED FOR EQUIPMENT CLEANING ARE TRANSPORTED TO THE SANITARY LANDFILL. LESS THAN A REGULATED QUANTITY.		
3.			
4.			
5.			

\* SILVAMUS PRODUCTS, INCORPORATED HAS BEEN DETERMINED TO BE A SMALL QUANTITY GENERATOR (CONDITIONALLY EXEMPT) TSD REGULATIONS N/A

- B. PRETRANSPORT, CONTAINERIZATION AND LABELING 10 CSR 25-5.262(2) AND 5.262(2)(C))

Waste Packaged, marked and labeled per DOT during entire on-site storage period and prior to transport. . . . . ( )

Placards available for use by transporters . . . . . 1

Satellite accumulation requirements met (if applicable). . . . . ( )

b. Containers marked identifying contents and beginning date ( )

b. Containers marked identifying contents and beginning date . . . . ( )

c. Containers kept closed/compatible/good condition. . . . . ( )

hz. waste). . . . . ( )

C. WASTE ANALYSIS 10 CSR 25-7.265(2) AND 7.264(2)(B)

Waste analysis plan. . . . . 1

Identify hazardous wastes handled at facility. . . . .

Means to confirm wastes received from off-site . . . . .

D. SECURITY 10 CSR 25-7.265(1) AND 7.265(2)(B)

24-hour surveillance system at facility of

An artificial or natural boundary/controlled access. . . . .

Restricted access sign posted at each entrance . . . . .

Legible from a distance of 25 feet . . . . .

Briefly describe waste streams managed at each TSD process.

<u>Waste</u>	<u>Amount/month</u>	<u>Process</u>	<u>Design Capacity</u>
	<i>NONE</i>		

E. GENERAL INSPECTION 10 CSR 25-7.265(2) AND 7.265(2)(B)

- Facility inspected and maintained. . . . . ( )
- Inspection log and written schedule for inspecting . . . . . ( )
- Inspect emergency equipment. . . . . ( )
- Inspect security devices . . . . . ( )
- Inspect operating and structural equipment . . . . . ( )

F. PERSONNEL TRAINING 10 CSR 25-7.265(2) AND 7.265(2)(B)

- Documentation of hazardous waste director's qualifications or training ( )
- Completed classroom or on-the-job training . . . . . ( )
- Job title, description, and name of person filling position. . . . . ( )
- Written record of the type and amount of training given. . . . . ( )
- Documentation confirming that training has been given. . . . . ( )

G. PREPAREDNESS AND PREVENTION 10 CSR 25-7.265(2) AND 7.265(2)(C)

- Internal communication or alarm system . . . . . ( )
- Device in the hazardous waste operation area capable of summoning emergency assistance . . . . . ( )
- Fire control, spill control, and decontamination equipment available . . ( )
- Adequate water supply for fire control equipment . . . . . ( )
- Adequate and proper safety equipment available . . . . . ( )
- Adequate aisle space . . . . . ( )
- Arrangements with local emergency agencies . . . . . ( )

H. CONTINGENCY PLAN AND EMERGENCY PROCEDURES 10 CSR 25-7.265(2) AND 7.265(2)(D)

- Contingency plan . . . . . ( )
- Detailed description of procedures that personnel must implement in response to fires, explosions, or release of hazardous waste . . . . . ( )
- Describe formal arrangements with emergency agencies . . . . . ( )
- Names, addresses and phone numbers (home & office) of emergency coordinators . . . . . ( )
- Emergency equipment including its description and location . . . . . ( )
- Evacuation plan if applicable. . . . . ( )

I. WASTE OIL 10 CSR 25-11.010

- Waste oil properly handled . . . . . ( )
- Written waste oil contract maintained. . . . . ( )

J. MANIFEST, RECORDS, REPORTING 10 CSR 25-7.265(2) AND 7.265(2)(E)  
For off-site facilities

- Manifests signed and dated . . . . . ( )
- Copy to transporter. . . . . ( )
- Copy to generator in 30 days . . . . . ( )
- Copy at facility for 3 years . . . . . ( )

Operating record

- Description, quantity, and TSD process for all hazardous wastes. . . . ( )
- Location and quantity of all hazardous waste . . . . . ( )
- Waste analysis records from off-site sources . . . . . ( )
- Summary and description of emergency incidents . . . . . ( )
- Record of inspections. . . . . ( )
- Monitoring, testing and analytical results if necessary. . . . . ( )

Reporting

- Unmanifested waste reports for off-site facilities . . . . . ( )
- Reports for emergencies, spills, closure . . . . . ( )

K. INTERIM STATUS CONTAINERS 10 CSR 25-7.265(2) AND 7.265(2)(I)

- Containers closed and in good condition. . . . . ( )
- Containers made of materials compatible with hazardous wastes placed in them . . . . . ( )
- Hazardous waste containers storage area inspected once a week. . . . . ( )
- Inspection log . . . . . ( )
- Containers holding ignitable or reactive waste at least 50 ft. from the property line. . . . . ( )
- Incompatible waste placed in different containers. . . . . ( )
- Are storage containers holding hazardous waste which are incompatible with nearby materials separated by dikes, berms, walls, or other devices. . . ( )
- Containers stored within a containment system (if applicable) meeting criteria of 10 CSR 25-7.265(2)(I). . . . . ( )

L. INTERIM STATUS TANKS - 10 CSR 25-7.265(2) AND 7.265(2)(J)  
(See Tank Checklist)

M. INTERIM STATUS SURFACE IMPOUNDMENTS 10 CSR 25-7.265(2) AND 7.265(2)(K)

- 2 ft. of freeboard in surface impoundment. . . . . ( )
- Earthen dikes have protective covers . . . . . ( )
- New additions, replacements, or expansions of existing surface impoundments designated with double liner and leachate system . . . . ( )
- Waste analyses conducted or written documentation obtained before placing a substantially different hazardous waste into a surface impoundment used for storage or treatment . . . . . ( )
- Freeboard level inspected each operating day . . . . . ( )
- Dikes & vegetation inspected weekly for leaks, deterioration or failures ( )
- Inspections recorded in inspection logs. . . . . ( )
- Waste treated, rendered or mixed so that mixture no longer meets the definition of ignitable or reactive. . . . . ( )
- Incompatible wastes segregated in separate surface impoundments. . . . ( )

- N. GROUNDWATER MONITORING 10 CSR 25-7.265(2) AND 7.265(2)(F)  
Applicable to surface impoundments, landfills and landfarms
- Groundwater monitoring wells installed . . . . . ( )
  - Wells are structurally sound . . . . . ( )
  - Sampling and analysis plan on-site . . . . . ( )
  - Samples and groundwater levels taken . . . . . ( )
  - Groundwater monitoring results kept. . . . . ( )
- O. CLOSURE AND POST-CLOSURE 10 CSR 25-7.265(2) AND 7.265(2)(G)
- Closure plan for facility. . . . . ( )
  - Description of how and when facility will be closed. . . . . ( )
  - Estimate of maximum inventory of hazardous waste . . . . . ( )
  - Steps to decontaminate equipment . . . . . ( )
  - Post-closure plan for disposal facilities only . . . . . ( )
- P. FINANCIAL REQUIREMENTS 10 CSR 25-7.265(2) AND 7.265(2)(H)
- Cost estimate for facility closure . . . . . ( )
  - Financial assurance for closure and post-closure . . . . . ( )
  - Liability for sudden accidents . . . . . ( )
  - Liability for non-sudden accidents for disposal only . . . . . ( )

COMMENTS: FACILITY DID NOT CLASSIFY AS A TSD.  
SMALL QUANTITY CONDITIONALLY EXEMPT  
RECOMMEND RE-CLASSIFICATION - FACILITY NEEDS TO  
SUBMIT DOCUMENTATION FOR PROOF OF NON-TSD

Inspector Signature & Title: Albert R. Zampala ENVIRONMENTAL ENGINEER  
Office: SOUTHEAST REGIONAL OFFICE, POPLAR BLUFF, MO

IN COMPLIANCE (✓)  
IN VIOLATION OR  
ABSENT (—)

**APPENDIX D**

---

**Missouri Department of Natural Resources  
Letter of Warning**

3.500 STE. GENEVIEVE CO.-HW  
Silvanus Products, Inc.



JOHN ASHCROFT  
Governor

G. TRACY MEHAN III  
Director

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

Division of Energy  
Division of Environmental Quality  
Division of Geology and Land Survey  
Division of Management Services  
Division of Parks, Recreation,  
and Historic Preservation

DIVISION OF ENVIRONMENTAL QUALITY

Poplar Bluff Regional Office  
948 Lester St.  
P.O. Box 1420  
Poplar Bluff, MO 63901  
314-785-0832

May 2, 1990

Mr. Urban Klein  
Vice President, Sales Manager  
Silvanus Products, Incorporated  
40 Merchant Street  
Ste. Genevieve, Missouri 63670

L.O.W. 90-SE 003

CERTIFIED MAIL: P 179 368 276

Dear Mr. Klein:

Enclosed is a Report on Inspection of the Silvanus Products, Incorporated facility conducted on December 20, 1989. This inspection was made to determine if Silvanus Products, Incorporated was in compliance with the environmental laws of the State of Missouri and rules of the Department of Natural Resources and applicable rules of the U.S. Environmental Protection Agency pertaining to hazardous waste management. The contents of the report are believed to be self-explanatory. If, however, you have any questions concerning any part of the report, please call Albert R. Wampler at our Poplar Bluff Regional Office, 314-785-0832.

The Department of Natural Resources strongly urges that the recommendations contained in this report be given your immediate attention. The recommendations are, in our best judgement, necessary actions to return your facility to compliance. Your facility should submit copies of documentation requested in these recommendations to the Department of Natural Resources, Waste Management Program, Attn: Arthur Groner, Section Chief, Hazardous Waste Enforcement, P.O. Box 176, Jefferson City, MO 65102 and to the Department of Natural Resources, Southeast Regional Office, Regional Administrator, P.O. Box 1420, Poplar Bluff, MO 63901.

Compliance should be completed within thirty (30) days of receipt of this report and documentation of compliance should be mailed to each above mentioned offices within thirty (30) days of receipt of this report. Staff of the Department of Natural Resources will be

Mr. Urban Klein  
May 2, 1990  
Page 2

performing future investigations to determine if corrective actions have been successful in achieving compliance.

Sincerely,



James A. Burris, P.E.  
Regional Administrator

JAB/<sup>ARW</sup>ARW/sw

Enclosures

cc: Arthur Groner, Waste Management Program ✓

## **APPENDIX E**

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### **Burns and McDonnell Waste Consultants Original Closure Plan Review Comments**

JOHN ASHCROFT  
Governor



G. TRACY MEHAN III  
Director

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY

P.O. Box 176

CERTIFIED MAIL #P 396 604 161 Jefferson City, MO 65102  
RETURN RECEIPT REQUESTED

January 24, 1992

RECEIVED

JAN 30 1992

PRMT SECTION

Mr. Urban Kline  
Sylvanus Products, Inc.  
40 Merchant St.  
St. Genevieve, MO 63670

RE: Container Storage Facility Closure Plan, EPA ID Number MOD092351642  
Facility Location: 40 Merchant St., St. Genevieve, MO

Dear Mr. Kline:

Enclosed you will find the comments generated by our consultant's (Burns & McDonnell Waste Consultants, Inc.) review of the closure plan for the above referenced hazardous waste management unit. The review of the closure plan has been conducted to ensure conformance of the plan with 10 CSR 25-7.265 and 40 CFR Part 265 Subpart G. Burns & McDonnell Waste Consultants, Inc. has provided the technical review of the closure plan while the department still maintains approval authority for the closure plan. Please respond to the enclosed comments with a revised closure plan and/or clarifying response within thirty (30) days after receipt of this letter. If you should have any questions, please do not hesitate to call Mr. Ken Volmert of this office at (314) 751-3176. Please note, we may ask that your questions also be discussed with our consultant. If within thirty (30) days after receipt of this comment letter, a revised closure plan and/or adequate response has not been received, the department may approve the existing closure plan with modifications in accordance with the procedures outlined in 40 CFR Part 265.112 (d)(4).

Sincerely,

HAZARDOUS WASTE PROGRAM

Daniel M. Tschirgi, P.E.  
Chief, Hazardous Waste Permits Unit

DMT:kvj

Enclosure

c: Lynn Harrington, P.E., EPA Region VII  
Southeast Regional Office



EMPLOYEE - OWNED  
**Burns & McDonnell**  
ENGINEERS-ARCHITECTS-CONSULTANTS

January 10, 1992

Mr. Robert K. Morrison, P.E.  
Missouri Department of Natural Resources  
Hazardous Waste Program  
P.O. Box 176  
Jefferson City, MO 65102

Silvanus Products, Inc.  
Container Storage Facility Closure Plan  
EPA ID Number: MOD092351642  
Facility Location: 40 Merchant St., Ste. Genevieve, MO

Dear Mr. Morrison:

Burns & McDonnell Waste Consultants, Inc. has completed a review of the closure plan for the container storage area at the Silvanus Products, Inc. facility, 40 Merchant Street, Ste. Genevieve, Missouri. The review was done in accordance with 10 CSR 25-7.265 and 40 CFR Part 265 Subpart G. This comment letter is submitted in accordance with the contract to provide engineering services we received by letter dated November 20, 1991.

This letter includes the comments resulting from the technical review of the closure plan submitted on September 1, 1982 by Georgia-Pacific Corporation, which owned the facility prior to Silvanus. On May 25, 1984, Georgia-Pacific sent a letter to the Missouri Department of Natural Resources (MDNR) requesting that their generator ID number and interim status be transferred to Silvanus due to sale of the property. As part of the property transfer, Georgia-Pacific removed the waste stored at the facility and shipped it on June 21, 1984, to Chemical Waste Management's facility in Emelle, Alabama. However, no notification was given to the MDNR prior to the removal of the waste nor was any sampling done to confirm a clean closure.

On January 29, 1985, Silvanus requested that the MDNR delete the generator ID number and interim status transferred to them by Georgia-Pacific because they would no longer be generating or storing hazardous waste as defined by RCRA regulations. The MDNR issued a letter on June 27, 1990 explaining why the Silvanus facility was still classified as an interim status treatment, storage, or disposal facility (TSDF). The name and ownership change does not change the fact that the facility is still under interim status. Based on the regulations and the fact that Silvanus has not submitted a revised closure plan, the closure plan submitted by Georgia-Pacific still applies to the facility. The comments with respect to that plan are as follows:

1. The plan does not provide an adequately detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, and structures during final closure. The plan must provide methods for sampling and testing of the concrete floor, the concrete block walls, and any

January 10, 1992

Page 2

significant cracks in the floor, and define the criteria for determining the extent of decontamination necessary to satisfy the closure performance standard in 40 CFR 265.111 and in 10 CSR 25-7.265(2)(G)3 and 4.

It was noted by Silvanus personnel that a new ceiling has been placed in the container storage area and the walls in the storage area painted. The sampling plan must address these changes in the storage area. The testing and sampling requirement to demonstrate closure in conformance with the closure performance standard is contained in 40 CFR 265.112(b)(4).

2. A schedule specifically for closure of the container storage unit must be included in the revised plan. It must specify the total time required to close the unit and the time required for intervening closure activities, which will allow tracking of the progress of partial and final closure as required by 40 CFR 265.112(b)(6). An estimate of the expected year of final closure must also be included as per 40 CFR 265.112(b)(7). The agency notifications required by 40 CFR 265.112(d) and the closure deadlines in 40 CFR 265.113 must be addressed in the closure schedule.
3. All hazardous wastes and hazardous waste residues must be removed at final closure to background levels or to below detection limits for the hazardous waste constituents. Removal of contaminated materials and/or the management of decontamination fluids during final closure may result in the owner or operator becoming a generator of hazardous wastes. The federal regulation 40 CFR 265.114 requires that the waste be handled in accordance with all applicable requirements of Part 262.
4. The revised plan must address the closure certification requirements in 40 CFR 265.115. Within 60 days of completion of final closure, the owner or operator must submit to the agency, by registered mail, a certification that the container storage area has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by an independent registered professional engineer.
5. The decontamination of equipment, containment systems, and structures during closure will require various levels of personnel safety as a result of the process used and if air monitoring equipment in the contaminated area indicates that volatile organic compounds are present. The personnel safety procedures that will be necessary during closure should be outlined in the closure plan and should meet all applicable Occupational Safety and Health Act (OSHA) requirements.

**Burns & McDonnell**

January 10, 1992

Page 3

6. The closure plan revisions that result from the above comments, such as the sampling and testing methods, the decontamination procedures, and the certification of closure by an independent registered professional engineer, will significantly change the estimated closure costs presented in the September 1, 1982 plan. Therefore, the cost estimate for closure of the container storage area must be updated to comply with 40 CFR 265.142 and to reflect changes in the plan that result from the above comments.

As part of our technical review, the facility was visited and photographed to document its current status and condition. Copies of the photographs are provided with this letter. Copies of other documentation and forms which support the review are provided as per the contract agreement.

If there are any questions regarding the comments in this letter, please call at (816) 333-4375. We appreciate the opportunity to be of service to the Department.

Sincerely,



Craig W. Borgmeyer, E.I.T.  
Project Engineer



Rickie L. Roberts, P.E.  
Project Engineer

CWB/RLR/pkw.005  
Enclosures

**APPENDIX F**

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**Silvanus Products Inc.  
March 30, 1992 Revised Closure Plan**



TSD file: SILVANUS PRODUCTS, INC.  
40 Merchant Street  
Ste. Genevieve, Missouri 63670  
Telephone (314) 883-3521



March 30, 1992

Mr. Dan Tschirgi  
Waste Management Program  
Missouri Department of Natural Resources  
Box 176  
Jefferson City, MO 65102

RECEIVED  
APR 02 1992

SUBJECT: Silvanus Products, Inc. Closure Plan

HAZARDOUS WASTE PROGRAM  
MISSOURI DEPARTMENT OF  
NATURAL RESOURCES

Dear Mr. Tschirgi,

Enclosed, please find a revised container storage Closure Plan which is written in accordance with 40CFR, Part 265, Subpart G, and applicable State closure requirements. As previously conveyed to your regional office, Silvanus Products, Inc. has not used the interim status storage area for a number of years and would like to terminate the interim status permit. Approval of this closure plan is requested to allow us to complete all RCRA requirements.

Should you have any questions on the technical content of the closure plan, please feel free to call our consultant engineer, Mr. John Doyle, at 314-636-5331. Should you have any further questions, please feel free to direct them to me.

Sincerely,

A handwritten signature in cursive script that reads 'Urban Klein'.

Urban Klein  
Silvanus Products, Inc.

cc: John Doyle  
MDNR-Poplar Bluff Regional Office

**CLOSURE PLAN**

for

**Silvanus Products, Inc.  
Ste. Genevieve, Missouri  
Container Storage Facility  
EPA ID No. MOD092351642**

by

**Environmental Concepts, Inc.  
Jefferson City, MO**

**March 21, 1992**

**RECEIVED**

APR 02 1992

HAZARDOUS WASTE PROGRAM  
MISSOURI DEPARTMENT OF  
NATURAL RESOURCES

## 1.0 Introduction

This closure plan addresses the final closure procedures for a hazardous waste storage facility (TSDF) located at Silvanus Products, Inc., 40 Merchant Street, Ste. Genevieve, MO. This plant has operated since the mid 1950's. In November, 1980, Georgia-Pacific Corporation, the operator/owner at that time, filed a hazardous waste Part A permit application and obtained interim status (EPA ID Mo. MOD092351642). The wastes stored at the facility are listed in Section 2.0. Georgia Pacific manufactured and decorated vinyl products, notebook binders, menu covers, checkbook covers, bankbooks for recording loan payments. The site of the waste storage area is shown in Figure 1. The facility was initially permitted to hold 5,500 gallons. A closure plan for the facility was developed by Georgia-Pacific on September 1, 1982, however the plan was never completed in accordance with 40 CFR Part 265 Subpart G. On May 25, 1984, Georgia-Pacific transferred their generator I.D. number and interim status to Silvanus Products. Georgia-Pacific removed the waste stored at the facility and shipped it on June 21, 1984, to Chemical Waste Management, Emelle, Alabama.

Silvanus Products in a letter dated January 29, 1985, requested MDNR to delete the EPA ID number. Generator status was deleted, however, MDNR's position is that closure was not achieved for the TSDF and therefore the facility is still on record as being a TSDF. The storage facility at the Silvanus plant is a 15' by 35' room which prior to 1984 was used to store rags containing solvent in 55-gallon drums.

Georgia-Pacific had an incinerator which according to Silvanus Products was used for burning waste paper. The burning was discontinued at the request of the City of Ste. Genevieve because of smoke emissions. This incinerator was not included as a part of the

original closure plan, nor was it listed on the Part A submittal. The incinerator was removed in 1984 and dealt with as scrap metal according to Silvanus Products.

## **2.0 Description of Hazardous Waste Management Unit**

The hazardous waste unit consists of one 15' x 35' room which has not been used for storage of hazardous waste since 1984-1985. The waste stored was containerized contaminated rags. There were no vessels, pipes, or other equipment in the room which handled hazardous waste according to Silvanus Products.

The floor of the room is concrete and the walls are concrete block. Silvanus personnel have placed a new ceiling in the room (suspended) and painted the walls. The wastes designated in the Part A application for storage are listed in Table 1. The floor has a small hairline crack with no separation on visual inspection.

### **3.0 Description of How the Unit Will Be Closed**

The unit will be closed by wipe testing the floor, walls and the original ceiling and taking a background wipe test in the warehouse area (see Figure 1) for all chemicals suspected to have been stored in this unit (i.e. those listed in Table 1). Two wipe samples will be taken on the floor, one near the crack and another in the most obvious area of contamination (if any). The rationale for the location of the background is that the nearby warehouse is typical of Silvanus operations.

Two samples will be taken from two of the walls and one sample will be taken from the old ceiling above the suspended ceiling. (See wipe procedures in Section 4.0).

Any hazardous wastes detected above background levels will mandate a cleaning of that surface area of the room in which contamination was detected. After cleaning, wipe testing will be repeated for the contaminant(s) found.

### **4.0 Residue Removal and Decontamination Procedures**

Residues, if found, will be removed using an appropriate solvent and rags with all contaminated surfaces being wiped by hand. Level D work clothes and protective gloves will be worn by workers if surface cleaning is necessary.

Wipe testing will be done using methanol as the wipe solvent. A 100 cm<sup>2</sup> area will be wipe tested by wiping the surface with absorbent gauze for one minute or as necessary in two directions. Impervious disposable gloves will be worn during the wipe tests. The vials used to hold each wipe sample shall be filled with methanol such that no bubbles appear in the vials when inverted. Twenty ml. vials will be used to contain the samples. The test methods for the wipe tests are shown in Table 1.

## **5.0 Procedures for Equipment Cleaning**

Not applicable.

## **6.0 Soil Testing - Boring Program**

No liquid hazardous waste was stored at the site. Only solid hazardous waste was stored in sealed drums. Therefore, based on the information available no soil testing or soil removal will be necessary to complete the closure of this storage room.

## **7.0 Closure Schedule**

Wipe Sampling	1 day
Laboratory Testing	14 days
Wall/Floor Cleaning (if necessary)	7 day
Retest (if necessary)	14 days
Engineer's Certification/Inspection	14 days
Review of Data	
Estimated Closure Time	36-50 days

The closure will be completed and certified by a registered professional engineer within 3 months of approval of the closure plan by MDNR.

## **8.0 Closure Cost Estimate**

Laboratory Analysis (Background plus six samples)	\$6300.00
Sample Technician	\$400.00
Engineer Review/Certification	\$1100.00
Surface Cleaning (Optional) - 2 men 8 hr. @ \$15/hr.	\$240.00

Total Estimated Closure Costs (Range) \$8040-11,140 with Retests

## **9.0 Missouri Deed Notice Requirements**

The closure plan will result in the removal of hazardous wastes to below background

levels, therefore a deed notification will not be required as specified in 10 CSR 25-7.265.

For the purpose of this closure background levels shall mean levels found in the warehouse sample for all chemicals listed in the 1980 Georgia-Pacific Part A.

**TABLE 1**  
Annual Quantities of Waste Listed on Part A  
and Test Methods for Closure Verification  
Georgia-Pacific Corporation - November, 1980  
Ste. Genevieve, MO

	<u>Scan</u>	<u>Detection Limit (mg)</u>
U002 - 1500 lb/yr. - Acetone	Volatile <sup>(1)</sup>	200
U031 - 1500 lb/yr. - 1 - Butanol	G.C. <sup>(3)</sup>	200
U112 - 1500 lb/yr. - Ethyl Acetate	Volatile	200
U117 - 1500 lb/yr. - Ethyl Ether	Volatile	200
U159 - 1500 lb/yr. - Methyl Ethyl Ketone	Volatile	200
U239 - 1500 lb/yr. - Xylene	Volatile	200
F001 - 1500 lb/yr. - Tetrachloroethylene	Volatile	200
Trichloroethylene	Volatile	200
Methylene Chloride	Volatile	200
1,1,1 Trichloroethane	Volatile	200
Carbon Tetrachloride	Volatile	200
Chlorinated Fluorocarbons	Volatile	200
F002 - 1500 lb/yr. Chlorobenzene	Volatile	200
1,1,2 Trichloro - 1,2,2	Volatile	200
Trifluouroethane		
Ortho-dichlorobenzene	Semi-Volatile	100
Trichlorofluoromethane	Volatile	200
1,1,2 Trichlorethane	Volatile	200
F003 - 1500 lb/yr. Ethyl benzene	Volatile	200
Methyl isobutyl ketone	Volatile	200
n - butyl alcohol	G.C.	200
Cyclohexanone	G.C.	200
Methanol	N/A	---
F004 - 1500 lb/yr. Cresols	Semi-Volatile <sup>(2)</sup>	100
Cresylic Acid	Semi-Volatile	100
Nitro benzene	Semi-Volatile	100
F005 - 1500 lb/yr. Carbon Disulfide	Volatile	200
Isobutanol	G.C.	200
Pyridine	Semi-Volatile	100
Benzene	Volatile	200
2 - ethoxyethanol	G.C.	200
2 - nitropropane	Volatile	200

(1) EPA Method 8240

(2) EPA Method 8270

(3) G.C. Gas Chromatograph

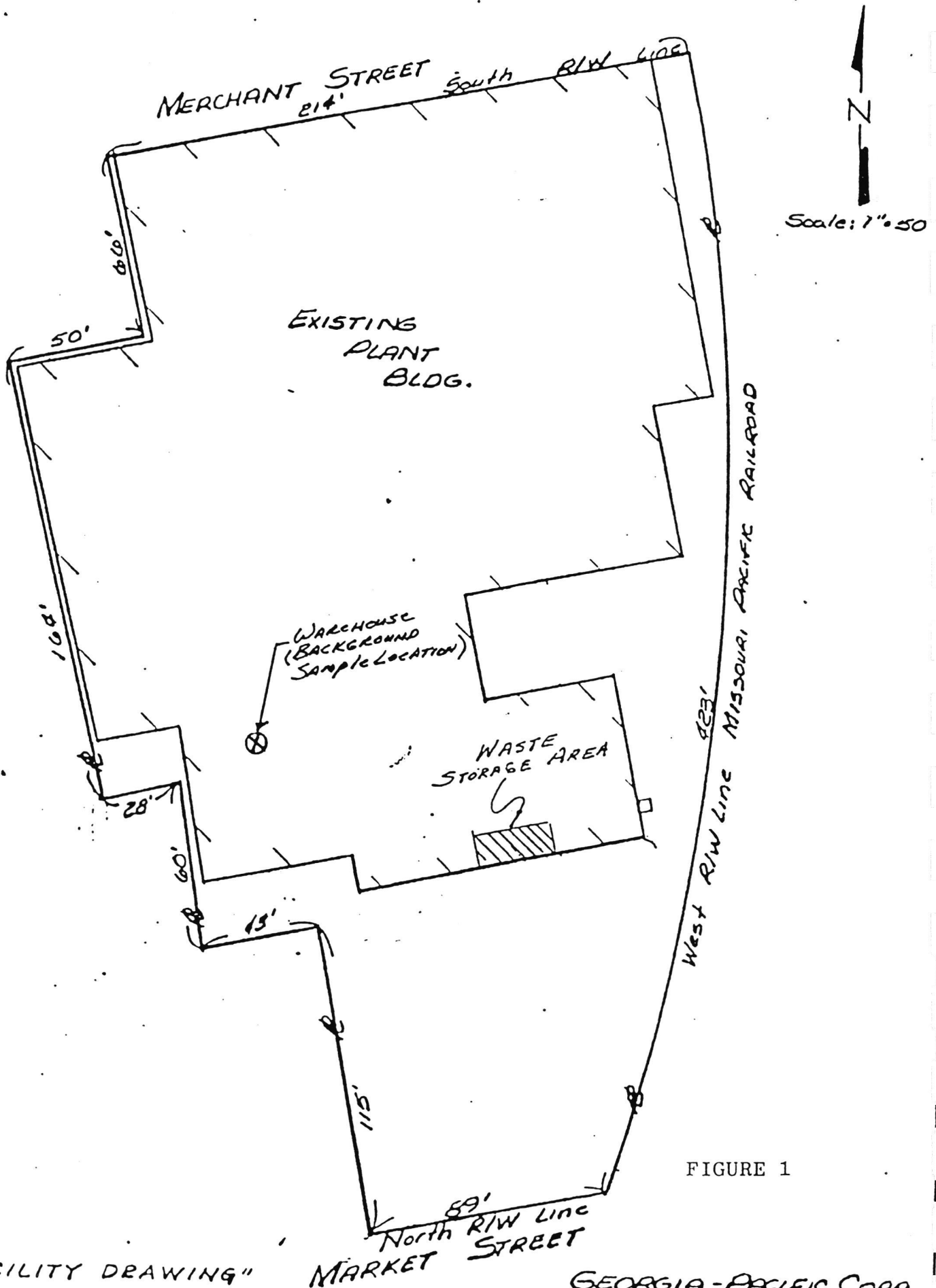


FIGURE 1

"FACILITY DRAWING"

GEORGIA-PACIFIC CORP.  
NATIONAL COVER DIVISION  
ST. LOUIS, MO.

## **APPENDIX G**

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### **Waste Manifests/Manifest Log**

NOTE: IF BY AIR TRANSPORT, PREPARE FOR INFORMATION ON

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
Division of Environmental Quality  
Waste Management Program  
P.O. Box 176 Jefferson City, Missouri 65102  
314-751-3176

590579

EMERGENCY RESPONSE  
U.S. COAST GUARD  
1-800-424-8802  
CHEM TREC  
1-800-424-9300  
DEPT. OF NATURAL RESOURCES  
314-634-2436

WASTE RAGS  
(s.screen & printing)

HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12-Pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-92

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>MOD092351642</b>	Manifest Document No. <b>00002</b>		2. Page <b>1</b> of <b>2</b>	Information in the shaded areas is required by State Law.	
3. Generator's Name and Mailing Address <b>SILVANUS PRODUCTS, INC. 40 MERCHANT ST. ST. GENEVIEVE, MO. 63670</b>					A. Missouri Manifest Document Number <b>0101-6519-00001</b>		
4. Generator's Phone (314) <b>883-3521</b>					B. G.S.I. (Gen. Site Address) <b>SAKE</b>		
5. Transporter 1 Company Name <b>SAFETY-KLEEN CORP.</b>					C. MO. Transporter's ID <b>1215 P21-2002</b>		
6. US EPA ID Number <b>MOD000669051</b>					D. Transporter's Phone		
7. Transporter 2 Company Name <b>SAFETY-KLEEN CORP.</b>					E. MO. Transporter's ID		
8. US EPA ID Number <b>ILD051060408</b>					F. Transporter's Phone		
9. Designated Facility Name and Site Address <b>SAFETY-KLEEN CORP. STATE HWY 146 NEW CASTLE, KY. 40050</b>					G. State Facility ID <b>010101001</b>		
10. US EPA ID Number <b>KYD053348108</b>					H. Facility's Phone		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER)					12. Containers	13. Total Quantity	14. Unit Wt/Vol.
a. <b>RQ WASTE COMPOUND, CLEANING, LIQUID FLAMMABLE LIQUID NA1993 (FO03)(ERG#27)</b>					<b>2</b> <b>DM</b>	<b>657</b>	<b>P</b>
b.							
c.							
d.							
15. Special Handling Instructions and Additional Information <b>IF UNDELIVERABLE, RETURN TO GENERATOR EMERGENCY RESPONSE NUMBER 1-708-888-4660 (24 HR)</b>					K. Handling Code (Facility Use Only) <b>38883435</b>		
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name <b>VERNON T. SCHWART</b>					Signature <i>[Signature]</i>		Month Day Year <b>10/31/92</b>
17. Transporter 1 Acknowledgement of Receipt of Materials							
Printed/Typed Name <b>RANDY FISH</b>					Signature <i>[Signature]</i>		Month Day Year <b>10/31/92</b>
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name <b>LOU SHRUM</b>					Signature <i>[Signature]</i>		Month Day Year <b>10/31/92</b>
19. Discrepancy Indication Space							
20. Designated Facility Owner or Operator: Certification of receipt and handling of hazardous materials covered by this manifest except as noted in Item 19.							
Printed/Typed Name <b>Dianne Louden</b>					Signature <i>[Signature]</i>		Month Day Year <b>10/31/92</b>

MISSOURI DNR FINAL COPY - PART 1

THIS COPY MUST BE SENT BACK TO THE GENERATOR BY THE DESIGNATED FACILITY THEN TRANSMITTED TO THE DEPARTMENT BY THE GENERATOR.

INSTRUCTIONS FOR THE COM-  
PLETION OF THIS FORM ARE ON  
REVERSE SIDE.

THIS DOCUMENT MUST BE USED  
FOR ALL MISSOURI-DESTINED  
SHIPMENTS.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Division of Environmental Quality

Waste Management Program

P.O. Box 176 Jefferson City, Missouri 65102

314-751-3176

HAZARDOUS WASTE MANIFEST

590579

EMERGENCY RESPONSE  
U.S. COAST GUARD  
1-800-424-8802  
CHEM TREC  
1-800-424-9300  
DEPT. OF NATURAL RESOURCES  
314-634-2436

Please print or type (Form designed for use on elite (12-Pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page	Information in the shaded areas
		MOD092351642	00001	2 of 2	Is required by State Law.
3. Generator's Name and Mailing Address SILVANUS PRODUCTS, INC. 40 MERCHANT ST. ST. GENEVIEVE, MO. 63670		4. Generator's Phone (314) 883-3521		A. Missouri Manifest Document Number D 01 1 6 5 1 9 10 0 0 1	
5. Transporter 1 Company Name SCHNEIDER TRANS.		6. US EPA ID Number WID980904742		B. G.S.I. (Gen./Site Address) SAME	
7. Transporter 2 Company Name		8. US EPA ID Number		C. MO. Transporter ID	
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. STATE HWY 146 NEW CASTLE KY 40050		10. US EPA ID Number KYD053348108		D. Transporter's Phone	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER)		12. Containers		13. Total Quantity	14. Unit Wt/Vol.
a. THIS PAGE OF					
b. MANIFEST FOR SHIPPING					
c. PURPOSES					
d. ONLY					
Additional Descriptions for Materials Listed Above		K. Handling Code (Facility Use Only)			
		a. Interim b. Final			
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name VERNON T SCHWART		Signature Vernon T Schwart		Month Day Year 1 1 92	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Roger Hornbeck		Signature Roger Hornbeck		Month Day Year 03 26 92	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Designated Facility Owner or Operator: Certification of receipt and handling of hazardous materials covered by this manifest except as noted in item 19.					
Printed/Typed Name Dianne Louden		Signature Dianne Louden		Month Day Year 03 22 92	

INSTRUCTIONS FOR THE COM-  
PLETION OF THIS FORM ARE  
RF  
TI PARTS WASHER  
FC  
SI

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Division of Environmental Quality

Waste Management Program

P.O. Box 176 Jefferson City, Missouri 65102

314-751-3176

HAZARDOUS WASTE MANIFEST

EMERGENCY RESPONSE  
U.S. COAST GUARD  
1-800-424-8802  
CHEM TREC  
1-800-424-9300  
DEPT. OF NATURAL RESOURCES  
314-634-2436

Please print or type (Form designed for use on elite (12-Pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is required by State Law.
3. Generator's Name and Mailing Address SILVANUS PRODUCTS INC 40 MERCHANT STREET, STE GENEVIEVE MO 63670		MOD 092351642	64131		
4. Generator's Phone (314) 862-3521					
5. Transporter 1 Company Name SAFETY-KLEEN CORPORATION		6. US EPA ID Number MOD 000669051			
7. Transporter 2 Company Name		8. US EPA ID Number			
9. Designated Facility Name and Site Address SAFETY-KLEEN CORPORATION ROUTE 2 BOX 549D CAPE GIRARDEAU MO 63701		10. US EPA ID Number 5-030-01 MOD 000669051			
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER) WASTE PETROLEUM NAPHTHA COMBUSTIBLE LIQUID UN1255 (ERG #27) (DOO1)		12. Containers 1 DM	13. Total Quantity 65	14. Unit Wt/Vol P	
15. Special Handling Instructions and Additional Information EMERGENCY RESP 708-888-6440 24HR IF UNDELIVERABLE, RETURN TO GENERATOR. SKDOT# A: 501					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name VERNON T. SCHWARTZ		Signature Vernon T. Schwartz		Month Day Year 10/10/92	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name RANDY FISH		Signature Randy Fish		Month Day Year 10/10/92	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space A MO Mon Doc # reads "001659" 0002					
20. Designated Facility Owner or Operator: Certification of receipt and handling of hazardous materials covered by this manifest except as noted in item 19. Printed/Typed Name Sileen Tankerson					
Signature Sileen Tankerson		Month Day Year 10/10/92			

GENERATOR FINAL COPY - PART 2

THIS COPY MUST BE RETAINED BY THE GENERATOR AFTER ITS RETURN FROM THE TSDF.

INSTRUCTIONS FOR THE COM-  
PLETION OF THIS  
REVERSE SIDE:  
THIS DOCUMENT  
FOR ALL MISSOURI  
SHIPMENTS.

WASTE RAGS

S.Screen & Printing

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Division of Environmental Quality

Waste Management Program

P.O. Box 176 Jefferson City, Missouri 65102

314-751-3176

HAZARDOUS WASTE MANIFEST

EMERGENCY RESPONSE  
U.S. COAST GUARD  
1-800-424-8802  
CHEM TREC  
1-800-424-9300  
DEPT. OF NATURAL RESOURCES  
314-634-2436

Please print or type (Form designed for use on elite (12-Pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. <b>MOD092351642</b>	Manifest Document No. <b>00003</b>	2. Page 1 of 2	Information in the shaded areas is required by State Law.
3. Generator's Name and Mailing Address <b>SILVANUS PRODUCTS, INC. 40 MERCHANT STREET ST. GENEVIEVE, MO. 63670</b>			A. Missouri Manifest Document Number <b>0000359</b>		
4. Generator's Phone <b>(314) 883-3521</b>			B. G.S. (Gen./Site Address) <b>SANE</b>		
5. Transporter 1 Company Name <b>SAFETY-KLEEN CORP.</b>		6. US EPA ID Number <b>MOD000669051</b>		C. MO. Transporter ID <b>502-845-2455</b>	
7. Transporter 2 Company Name <b>SAFETY-KLEEN CORP.</b>		8. US EPA ID Number <b>ILD051060408</b>		D. Transporter's Phone <b>502-845-2455</b>	
9. Designated Facility Name and Site Address <b>SAFETY-KLEEN CORP. STATE HIGHWAY 146 NEW CASTLE, KY. 40050</b>		10. US EPA ID Number <b>KYD053348108</b>		E. MO. Transporter ID <b>502-845-2455</b>	
				F. Transporter's Phone <b>502-845-2455</b>	
				G. State Facility ID <b>502-845-2455</b>	
				H. Facility's Phone <b>502-845-2455</b>	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER)			12. Containers	13. Total Quantity	14. Unit Wt/Vol.
a. <b>RQ WASTE COMPOUND, CLEANING, LIQUID FLAMMABLE LIQUID NA1993 (FOO3) (ERG#27)</b>			<b>2</b>	<b>DM</b>	<b>822</b>
b.					
c.					
d.					
e.					
f.					
g.					
h.					
i.					
j.					
k.					
l.					
m.					
n.					
o.					
p.					
q.					
r.					
s.					
t.					
u.					
v.					
w.					
x.					
y.					
z.					
15. Special Handling Instructions and Additional Information <b>EMERGENCY RESPONSE NUMBER 1-708-888-4660 (24 HR) IF UNDELIVERABLE, RETURN TO GENERATOR</b>			<b>IL Trans. ID: 1123 SK DOT #: a. 1145</b>		
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name <b>VERNON T. SCHWERT</b>			Signature <i>Vernon T. Schwert</i>		Month Day Year <b>04/30/92</b>
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <b>RANDY FISH</b>			Signature <i>Randy Fish</i>		Month Day Year <b>04/30/92</b>
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name <b>Loy SHUM</b>			Signature <i>Loy Shum</i>		Month Day Year <b>05/07/92</b>
19. Discrepancy Indication Space					
20. Designated Facility Owner or Operator: Certification of receipt and handling of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name <b>Dianne Louder</b>					
Signature <i>Dianne Louder</i>			Signature <i>Dianne Louder</i>		Month Day Year <b>05/13/92</b>

RECEIVED MAY 26 1992

MISSOURI DNR FINAL COPY - PART 1

THIS COPY MUST BE SENT BACK TO THE GENERATOR BY THE DESIGNATED FACILITY THEN TRANSMITTED TO THE DEPARTMENT BY THE GENERATOR.

INSTRUCTIONS FOR THE COM-  
PLETION OF THIS FORM ARE ON  
REVERSE SIDE.

THIS DOCUMENT MUST BE USED  
FOR ALL MISSOURI-DESTINED  
SHIPMENTS.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Division of Environmental Quality

Waste Management Program

P.O. Box 176 Jefferson City, Missouri 65102

314-751-3176

HAZARDOUS WASTE MANIFEST

EMERGENCY RESPONSE  
U.S. COAST GUARD  
1-800-424-8802  
CHEM TREC  
1-800-424-9300  
DEPT. OF NATURAL RESOURCES  
314-634-2496

Please print or type (Form designed for use on elite (12-Pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. MOD092351642	Manifest Document No. 00003	2. Page of 2	Information in the shaded areas is required by State Law.
3. Generator's Name and Mailing Address SILVANUS PRODUCTS, INC. 40 MERCHANT STREET ST. GENEVIEVE, MO. 63670					
4. Generator's Phone ( 314 ) 883-3521					
5. Transporter's Company Name SCHNEIDER TRANS.		6. US EPA ID Number WID980904742			
7. Transporter's Company Name Tr. State Motor Transit Co		8. US EPA ID Number MOD 95038998			
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. STATE HIGHWAY 146 NEW CASTLE, KY. 40050		10. US EPA ID Number KYD053348108			
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER)		12. Containers	13. Total Quantity	14. Unit Wt/Vol.	
a. THIS PAGE OF					
b. MANIFEST FOR					
c. SHIPPING PURPOSES					
d. ONLY					
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name VERNON T SCHWERT		Signature Vernon T Schwert		Month Day Year 09/30/92	
17. Transporter's Acknowledgement of Receipt of Materials		Date			
Printed/Typed Name Roy G. Stout		Signature Roy G Stout		Month Day Year 10/11/92	
18. Transporter's Acknowledgement of Receipt of Materials		Date			
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Designated Facility Owner or Operator: Certification of receipt and handling of hazardous materials covered by this manifest except as noted in item 19.					
Printed/Typed Name Diane Louden		Signature Diane Louden		Month Day Year 10/11/92	

MISSOURI DNR FINAL COPY - PART 1  
THIS COPY MUST BE SENT BACK TO THE GENERATOR BY THE DESIGNATED  
FACILITY THEN TRANSMITTED TO THE DEPARTMENT BY THE GENERATOR.

5-030-01

## MISSOURI DEPARTMENT OF NATURAL RESOURCES

Division of Environmental Quality

Waste Management Program

P.O. Box 176 Jefferson City, Missouri 65102

314-751-3176

EMERGENCY RESPONSE  
 24 HOURS A DAY  
 1-800-442-8000  
 CHEM TRAC  
 1-800-424-6300  
 DEPT. OF NATURAL RESOURCES  
 314-604-2435

THIS BOX  
 FOR ALL  
 SHIPMENTS

PARTS WASHER

## HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12-Pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-92

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>MOD 092351642</b>		Manifest Document No. <b>00004</b>		2. Page <b>1</b> of <b>1</b>		Information in the shaded areas is required by State Law.	
3. Generator's Name and Mailing Address <b>SILVANUS PRODUCTS INC 40 MERCHANT ST ST GENEVIEVE MO 63670</b>				4. Generator's Phone ( <b>314</b> ) <b>883-3521</b>		A. Missouri Manifest Document Number <b>001659 0004</b>		B. Generator's Site Address <b>SAME</b>	
5. Transporter 1 Company Name <b>SAFETY-KLEEN CORP.</b>				6. US EPA ID Number <b>MOD 000669051</b>		C. MO. Transporter's ID <b>H-1273 P13-782</b>		D. Transporter's Phone <b>314 335-1616</b>	
7. Transporter 2 Company Name				8. US EPA ID Number		E. MO. Transporter's ID		F. Transporter's Phone	
9. Designated Facility Name and Site Address <b>SAFETY-KLEEN CORP. ROUTE 2, BOX 549-D CAPE GIRARDEAU, MO 63701</b>				10. US EPA ID Number <b>5-030-01</b>		G. State Facility's ID <b>HH-0019</b>		H. Facility's Phone <b>314 335-1616</b>	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER)						12. Containers		13. Total Quantity	
a. <b>WASTE PETROLEUM NAPHTHA COMBUSTIBLE LIQUID UN1255(D001)(ERG #27)</b>						1		DM 45	
b.								P	
c.									
d.									
J. Additional Descriptions for Materials Listed Above						K. Handling Code (Facility Use Only)			
a. <b>D039 D018</b>						Interim <b>502</b> Final <b>154</b> Comments			
b.						c.			
c.						d.			
15. Special Handling Instructions and Additional Information <b>9222 40105363 704514 5-030-01-9103 02</b>									
<b>EMERGENCY RESP#708-888-4660 24HR.</b>									
<b>SKDOT# A: 501 B: C: D:</b>									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and applicable state regulations.									
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, If I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name <b>VERNON T SCHWENT</b>				Signature <i>Vernon T Schwent</i>				Month Day Year <b>05/18/92</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials				Printed/Typed Name <b>RANDY FISH</b>				Signature <i>Randy Fish</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name <b>VERNON T SCHWENT</b>				Signature <i>Vernon T Schwent</i>	
19. Discrepancy Indication Space <b>GENERATOR signed in WRONG PLACE Line 18 ERROR CORRECTED</b>									
20. Designated Facility Owner or Operator: Certification of receipt and handling of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name <b>Eileen Jenkinson</b>				Signature <i>Eileen Jenkinson</i>				Month Day Year <b>05/18/92</b>	

MISSOURI DNR FINAL COPY - PART 1

THIS COPY MUST BE RETURNED TO THE GENERATOR BY THE DESIGNATED FACILITY THEN TRANSMITTED TO THE DEPARTMENT BY THE GENERATOR.

# Silvanus Products, Inc.

# Silvanus Products, Inc.

## **APPENDIX H**

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### **Safety-Kleen Wastestream Descriptions**

ACCEPT WASTE RAGS  
S.Screen & Printing



ACCEPT  
CONTROL #: 0000118948-4  
LAB #: 0000028748-1  
SURVEY #: 0000233416

CUSTOMER INFORMATION: 5030-01-9103

FEDERAL EPA ID: MOD092351642  
STATE EPA ID: 01659

SILVANUS PRODUCTS INC  
40 MERCHANT ST  
ST GENEVIEVE

MO 63670

ATTN: URBAN KLEIN

BRANCH: 503001 - CAPE GIRARDEAU

GENERATOR: SILVANUS PRODUCTS INC  
NATURE OF BUSINESS: MNFG SILKSCREEN  
FEDERAL EPA ID: MOD092351642 IL: MO: 1659 ST: ID: STATUS: SQG  
FACILITY ADDRESS: FOR MANIFEST BILLING:  
40 MERCHANT ST  
ATT VERNON SCHWENT  
ST GENEVIEVE MO 63670  
GENERAL DESCRIPTION: CLOTH RAGS  
PROCESS DESCRIPTION: FROM CLEANING  
GENERATION AMOUNT: 55 GALLONS PER WEEK  
AMOUNT ON HAND: 55 IN DRUMS  
SHIPPING FREQUENCY: 4 WK IN DRUMS  
COLOR: MULTI PCT SOLIDS NOT SAMPLED:  
LAYERS OR PHASES: ONE PHYSICAL STATE: PASTE VISCOSITY: MEDIUM PH RANGE: 4-10  
MATERIAL COMPOSITION: VOL%  
NON-VOLATILE RESIDUE  
SOLVENTS  
ATTACHMENTS: NONE  
RESTRICTED SUBSTANCES: NONE  
HAZARD CLASS: NUMBER: NEED ASSISTANCE  
A WASTE DESCRIPTION AND TREATMENT STANDARDS: RCRA HAZARDOUS WASTE: YES  
LISTED EPA WASTE CODES: F003  
D. NO: 27192 TYPE OF SAMPLE: COMPOSITE # OF DRUMS SAMPLED: 1 TAKEN BY: SK REP  
NAME: URBAN KLEIN TITLE: PRES 10/28/1991 (314) 883-3521  
COMMENTS: L#28748-1

CORPORATE REVIEWS:		DISPOSITION REVIEWER	DATE	POSSIBLE FACILITIES:		PRICING CODE: F8
TECHNICAL:	ACCEPT	JHP	11/22/91	658	654	
REGULATORY:	ACCEPT	AAD	11/22/91			
OPERATING:	ACCEPT	JWH	11/22/91		000161	

APPROVED FACILITIES:

(658) SAFETY-KLEEN CORP	(654) SAFETY-KLEEN CORP
STATE HWY 146	633 EAST 138TH ST
NEW CASTLE KY 40050	DOLTON IL 60419
FED EPA#: KYD053348108	ILD980613913
STATE EPA#:	0310690006
TELEPHONE: 502/845-2453	708/849-4850
STATE CODE:	000161

APPROVD 0001145 DRUM OR BULK  
JT-EPA RQ WASTE COMPOUND, CLEANING, LIQUID  
ESC. FLAMMABLE LIQUID NA1993  
(FO03)(ERG# 27)  
COMMENTS: OK FOR THERMAL DESTRUCTION. FRS PART 82108.

EPA WASTE CODES  
FO03 D001

THIS SERVES AS NOTICE PER, 40CFR264.12(B), THAT THE FACILITY(IES) NOTED ABOVE  
HAS THE APPROPRIATE PERMITS AND IS WILLING TO RECEIVE THE MATERIAL DESCRIBED.

BRANCH/SUBMITTER: 503001  
KEN WALLSCOMPLETED: 11/25/91  
REVISED: 11/25/91

A C C E P T

A C C E P T

SILVANUS PRODUCTS INC  
CLOTH RAGSCONTROL #: 0118948-4  
SURVEY #: 233416

## GENERAL ANALYSIS OF TOTAL SAMPLE

COLOR : BLACK RED PINK  
NON-VOLATILE RESIDUE : 49.3 WT% DESCRIPTION: SOLID  
FLAMMABILITY : FLASHED AT 140 F BY SETAFLASH  
FLAMMABILITY : FLASHED AT 100 F BY SETAFLASH  
PH : EXTRACT BY METER 9.3  
RADIOACTIVITY : NONE DETECTED  
COMMENTS: RAG/BULK DENSITY

## FUEL EVALUATION OF TOTAL SAMPLE

HEAT CONTENT: 11100 BTU/LB  
TOTAL CHLORINE CL: 0.2 WT%  
TOTAL FLUORINE F: < 0.1 WT%  
ASH UPON COMBUSTION: < 1.0 WT%  
TOTAL BROMINE BR: < 0.1 WT%  
TOTAL SULFUR S: < 0.1 WT%

## GENERAL COMPOSITION:

	SPECIFIC GRAVITY	VISCOSITY (CENTIPOISE)	GENERAL COMPOSITION BY: APPEARANCE (VOL%)	TOTAL (WT %)
AQUEOUS PHASE (FREE WATER)			0.0	0.0
ORGANIC PHASE (FEEDSTOCK)			0.0	0.0
BOTTOM SLUDGE (SEMISOLIDS)			0.0	0.0
BOTTOM SOLID (SETTLED SOLIDS)			100.0	100.0
TOTAL	.500	> 50000 CPS	100.0	100.0

## SPECIFIC COMPOSITION OF TOTAL SAMPLE

	COMPOSITION OF:	TOTAL SAMPLE (WT%)	TOTAL SAMPLE (WT%)
WATER CONTENT		0.0	0.0
NON-VOLATILE RESIDUE	DESCRIPTION: SOLID	49.3	49.3
VOLATILE ORGANICS BY DIFFERENCE		50.7	50.7
TOTAL		100.0	100.0

## VOLATILE ORGANIC COMPOSITION OF TOTAL SAMPLE BY GAS CHROMATOGRAPHY

SAMPLE PREPARATION METHODS: CS2-EXTRACT

DETECTION METHODS : FID, FID, MASS-SPEC

COMPOUND NAME	CODE	CAS NUMBER	COMPOSITION OF: VOLATILE ORGANICS (WT%)	VOLATILE ORGANICS (WT%)	TOTAL SAMPLE (WT%)
XYLENES (ORTHO-, META-, AND PARA-)	XYLS	1330-20-7	40.0	40.0	20.3
METHYL ISOBUTYL KETONE	MIBK	108-10-1	18.1	18.1	9.2
PROPYL ACETATE, ISO-ETHYLBENZENE	IPAC	108-21-4	16.1	16.1	8.2
PROPYL ALCOHOL, ISO-	ETB	100-41-4	15.6	15.6	7.9
TOTAL OTHERS (<1.0% EACH)	IPA	67-63-0	5.4	5.4	2.7
VINYLPYRROLIDONE, N-	TO	0-05-5	3.1	3.1	1.6
	NVP	88-12-0	1.7	1.7	0.9
TOTAL			100.0	100.0	50.7

## SUMMARY OF VOLATILE ORGANIC COMPOSITION BY COMPOUND CHEMICAL CLASS WT%:

ALCOHOLS	5.4	ALIPHATIC HYDROCARBONS
AROMATIC HYDROCARBONS	55.6	CHLORINATED SOLVENTS
ESTERS	16.1	ETHERS
GLYCOL ETHERS		INHIBITORS
KETONES	18.1	NITROGEN COMPOUNDS

## SPECIFIC ORGANIC COMPOSITION

POLYCHLORINATED BIPHENYLS (PCBS): NONE DETECTED <  
SAFETY-KLEEN REGULATED COMPOUNDS: NONE DETECTED

## LABORATORY REVIEW: R

LEVEL: SEG CODE: RELEASED: 11/25/91  
LAB REVIEWERS: AJ AJ ANALYZED: 11/22/91  
HIGH VISCOSITY.

TRACKING INFORMATION: DATE FACILITY  
SURVEY RECEIVED : 11/14/91 SK TECHNICAL CEN  
SAMPLE RECEIVED : 10/31/91  
RESAMPLE SHIPPED :  
RESAMPLE RECEIVED:

THE ANALYSES CONTAINED HEREIN ARE PERFORMED SOLELY FOR THE PURPOSE OF QUALIFYING THE ANALYZED MATERIALS FOR ACCEPTANCE BY SAFETY-KLEEN IN ACCORDANCE WITH ITS PERMITS AND PROCESSING CAPABILITY.

NOTICE OF LAND DISPOSAL RESTRICTION OF WASTE IS REQUIRED UNDER 40 CFR PART 268.  
IPA WASTE CODES FOR LDR: F003 D001

CONTINUED ON NEXT PAGE

80918 - R2271 (RUN 11/25/91) PREQUALIFICATION EVALUATION - BRANCH INDUSTRIAL SERVICES PAGE 3  
MATERIAL ANALYSIS COMPLETED: 11/25/91  
BRANCH/SUBMITTER: 503001 REVISED: 11/25/91  
KEN WALLS

A C C E P T

A C C E P T

SILVANUS PRODUCTS INC  
CLOTH RAGS

CONTROL #: 0118948-4  
SURVEY #: 233416

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ANALYSIS DOES NOT INDICATE THAT MATERIAL IS CALIFORNIA LIST HALOGENATED ORGANIC COMPOUND WASTE.

NOTICE OF LAND DISPOSAL RESTRICTION OF WASTE

TO: SAFETY-KLEEN CORP EPA ID NO: ILD980613913  
633 EAST 138TH ST  
DOLTON IL 60419

Under manifest number \_\_\_\_\_ line number \_\_\_\_\_ (enter 11a, 11b, 11c, OR 11d) the Generator noted below is shipping to you a waste determined to be restricted under 40 CFR Part 268. In accordance with 40 CFR 268.7, the generator hereby provides notice that the waste is restricted and the EPA waste code and the appropriate treatment standards are as follows:

EPA Waste Codes: **F003 D001**

<u>F001-F005 Spent Solvents</u>	<u>TREATMENT STANDARDS (mg/l)</u>		Check All That Apply
<u>Regulated Hazardous Constituent</u>	<u>Wastewater w/Solvents</u>	<u>All Other Solvent Wastes</u>	
Acetone	0.05	0.59	_____
Benzene	0.07	3.7	_____
n-Butyl alcohol	5.0	5.0	_____
Carbon disulfide	1.05	4.81	_____
Carbon tetrachloride	0.05	0.96	_____
Chlorobenzene	0.15	0.05	_____
Cresols (and cresylic acid)	2.82	0.75	_____
Cyclohexanone	0.125	0.75	_____
1,2-Dichlorobenzene	0.68	0.125	_____
Ethyl acetate	0.05	0.75	_____
Ethyl benzene	0.05	0.053	_____X_____
Ethyl ether	0.05	0.75	_____
Isobutanol	5.0	5.0	_____
Methanol	0.25	0.75	_____
Methylene chloride	0.2	0.96	_____
Methylene chloride(from Pharm. Industry)	0.44	0.96	_____
Methyl ethyl ketone	0.05	0.75	_____
Methyl isobutyl ketone	0.05	0.33	_____X_____
Nitrobenzene	0.65	0.125	_____
Pyridine	1.12	0.33	_____
Tetrachloroethylene	0.079	0.05	_____
Toluene	1.12	0.33	_____
1,1,1-Trichloroethane	1.05	0.41	_____
1,1,2-Trichloroethane	0.03	7.6	_____
1,1,2-Trichloro-1,2,2-trifluoroethane	1.05	0.96	_____
Trichlorethylene	0.062	0.091	_____
Trichlorofluoromethane	0.05	0.96	_____
Xylene	0.05	0.15	_____X_____

<u>California List Prohibited Wastes</u>	<u>Level (mg/l)</u>	<u>Treatment Standard</u>	
Halogenated Organic Compounds	1000.0	Incineration	These treatment standards
Arsenic (As) Nonwastewaters	500.0	None	do not preclude solvent
Mercury (Hg) Nonwastewaters	20.0	None	recovery prior to disposal
Nickel (Ni)	134.0	None	Subsequent disposal of
Thallium (Tl)	130.0	None	unrecovered waste is
Chlorinated Biphenyls (PCB's)	50.0	Incineration	subject to these standards

<u>Waste Descriptions and/or Treatment Subcategory</u>		<u>Treatment Standards Reference in 40 CFR and Technology Codes for 40 CFR 268.42(a)</u>		<u>Check All That Apply</u>
<u>Waste Code</u>	<u>Description</u>	<u>Wastewaters</u>	<u>Nonwastewaters</u>	
D001:	Wastewaters (<1.0 wt% TOC and TSS)	268.42(a) DEACT	NA	
	Low TOC Ignitable Liquids (<10 wt% TOC)	NA	268.42(a) DEACT	
	High TOC Ignitable Liquids (>10 wt% TOC)	NA	268.42(a) RORGS, FSUBS, or INCIN	X
D002	Corrosives, all subcategories & CA list	268.42(a) DEACT	268.42(a) DEACT	
D004	Arsenic (As)	268.43(a)	268.41(a)	Variance until 5-8-92
D005	Barium (Ba)	268.43(a)	268.41(a)	
D006	Cadmium (Cd)	268.43(a)	268.41(a)	
D007	Chromium (Cr)	268.43(a)	268.41(a)	
D008	Lead (Pb)	268.43(a)	268.41(a)	
D009:	Low Mercury Subcategory (<260 ppm Hg)	268.43(a)	268.41(a)	Variance until 5-8-92
	High Mercury Subcategory (>=260 ppm Hg)	268.43(a)	268.42(a) RMERC	Variance until 5-8-92
D010	Selenium (Se)	268.43(a)	268.41(a)	
D011	Silver (Ag)	268.43(a)	268.41(a)	
Other Codes	See attachment for supplemental list			

Generator Name: SILVANUS PRODUCTS INC EPA ID: MOD092351642

Generator Representative Signature: \_\_\_\_\_

Name & Title of Representative: \_\_\_\_\_

Safety-Kleen Sample Number: 233416 Control Number: 0118948

NOTE: The USEPA has not determined treatment standards for the new TCLP EPA Waste Numbers D018 through D042

PREQUALIFICATION EVALUATION  
MANIFESTING INFORMATION

REVISED : 11/25/91

FLUID RECOVERY  
SILVANUS PRODUCTS INCCONTROL#: 0118948-4  
SAMPLE# : 233416

REQUIRED MANIFEST FORM: IL

Safety-Kleen Corp. provides this manifesting information for instructional purposes only. All the information is believed to be accurate, but is known to be incomplete. Federal and State regulations and the instructions on the manifest form should be consulted for complete information. In addition, certain variations may be allowed by regulations, but need to be approved by a Safety-Kleen representative prior to shipment.

UNIFORM HAZARDOUS WASTE MANIFEST	1. GENERATOR US EPA NO. <b>MOD092351642</b>	DOCUMENT NO. _____	2. PAGE _____	<u>UNDERLINED AREA ARE REQUIRED</u>
3. GENERATOR NAME AND MAILING ADDRESS <b>SILVANUS PRODUCTS INC 40 MERCHANT ST ATT VERNON SCHWENT ST GENEVIEVE MO 63670</b>			A. STATE MANIFEST DOCUMENT NUMBER _____	
4. GENERATOR PHONE (314) 883-3521			B. STATE GENERATORS ID <b>01659</b>	
5. TRANSPORTER 1 COMPANY NAME <b>SAFETY-KLEEN CORP.</b>	6. US EPA ID NUMBER _____		C. STATE TRANS ID _____	
7. TRANSPORTER 2 COMPANY NAME	8. US EPA ID NUMBER		D. TRANSPORTER PHONE - -	
9. FACILITY NAME AND SITE ADDRESS <b>SAFETY-KLEEN CORP 633 EAST 138TH ST DOLTON IL 60419</b>		10. US EPA ID NUMBER <b>ILD980613913</b>	E. STATE TRANS ID _____	
			F. TRANSPORTER PHONE - -	
			G. FACILITY STATE ID <b>0310690006</b>	
			H. FACILITY PHONE <b>708-849-4850</b>	
11. US DOT DESCRIPTION (INCLUDING ALL PARTS REQUIRED BY US DOT)			CONTAINER	I. WASTE NO
a. <b>RQ WASTE COMPOUND, CLEANING, LIQUID FLAMMABLE LIQUID NA1993 (F003)(ERG# 27)</b>			<b>DRUM OR BULK</b>	<b>F003</b> <b>000161</b>
b.				
J. ADDITIONAL DESCRIPTION FOR MATERIALS LISTED ABOVE <b>D001</b>			K. HANDLING CODES FOR WASTES ABOVE <b>S01/S02/T50</b>	
15. SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION				

CONTROL NO 0118948-4 SAMPLE NO 233416 CUSTOMER NUMBER 5-030-01-9103 -FOR ALL SAFETY-KLEEN SHIPMENTS

EMERG RESP# 708-888-4660 24 HR

SK-DOT NUMBERS A: 0001145 B:

NOTICE OF LAND DISPOSAL RESTRICTION OF WASTE IS REQUIRED

NOTICE OF LAND DISPOSAL RESTRICTION OF WASTE

TO: SAFETY-KLEEN CORP EPA ID NO: KYD053348108  
STATE HWY 146  
NEW CASTLE KY 40050

Under manifest number \_\_\_\_\_ line number \_\_\_\_\_ (enter 11a, 11b, 11c, OR 11d) the Generator noted below is shipping to you a waste determined to be restricted under 40 CFR Part 268. In accordance with 40 CFR 268.7, the generator hereby provides notice that the waste is restricted and the EPA waste code and the appropriate treatment standards are as follows:

EPA Waste Codes: **F003 D001**

<u>F001-F005 Spent Solvents</u>		<u>TREATMENT STANDARDS (mg/l)</u>	
<u>Regulated Hazardous Constituent</u>	<u>Wastewater w/Solvents</u>	<u>All Other Solvent Wastes</u>	<u>Check All That Apply</u>
Acetone	0.05	0.59	_____
Benzene	0.07	3.7	_____
n-Butyl alcohol	5.0	5.0	_____
Carbon disulfide	1.05	4.81	_____
Carbon tetrachloride	0.05	0.96	_____
Chlorobenzene	0.15	0.05	_____
Cresols (and cresylic acid)	2.82	0.75	_____
Cyclohexanone	0.125	0.75	_____
1,2-Dichlorobenzene	0.68	0.125	_____
Ethyl acetate	0.05	0.75	_____
Ethyl benzene	0.05	0.053	<u>X</u>
Ethyl ether	0.05	0.75	_____
Isobutanol	5.0	5.0	_____
Methanol	0.25	0.75	_____
Methylene chloride	0.2	0.96	_____
Methylene chloride(from Pharm. Industry)	0.44	0.96	_____
Methyl ethyl ketone	0.05	0.75	_____
Methyl isobutyl ketone	0.05	0.33	<u>X</u>
Nitrobenzene	0.65	0.125	_____
Pyridine	1.12	0.33	_____
Tetrachloroethylene	0.079	0.05	_____
Toluene	1.12	0.33	_____
1,1,1-Trichloroethane	1.05	0.41	_____
1,1,2-Trichloroethane	0.03	7.6	_____
1,1,2-Trichloro-1,2,2-trifluoroethane	1.05	0.96	_____
Trichloroethylene	0.062	0.091	_____
Trichlorofluoromethane	0.05	0.96	_____
Xylene	0.05	0.15	<u>X</u>

<u>California List Prohibited Wastes</u>	<u>Level (mg/l)</u>	<u>Treatment Standard</u>	
Halogenated Organic Compounds	1000.0	Incineration	_____
Arsenic (As) Nonwastewaters	500.0	None	_____
Mercury (Hg) Nonwastewaters	20.0	None	_____
Nickel (Ni)	134.0	None	_____
Thallium (Tl)	130.0	None	_____
Chlorinated Biphenyls (PCB's)	50.0	Incineration	_____

These treatment standards do not preclude solvent recovery prior to disposal. Subsequent disposal of unrecovered waste is subject to these standards.

<u>Waste Descriptions and/or Treatment Subcategory</u>		<u>Treatment Standards Reference in 40 CFR and Technology Codes for 40 CFR 268.42(a)</u>		<u>Check All That Apply</u>
<u>Waste Code</u>	<u>Description</u>	<u>Wastewaters</u>	<u>Nonwastewaters</u>	
D001:	Wastewaters (<1.0 wt% TOC and TSS)	268.42(a) DEACT	NA	_____
	Low TOC Ignitable Liquids (<10 wt% TOC)	NA	268.42(a) DEACT	_____
	High TOC Ignitable Liquids (>10 wt% TOC)	NA	268.42(a) RORGS, FSUBS, or INCIN	<u>X</u>
D002	Corrosives, all subcategories & CA list	268.42(a) DEACT	268.42(a) DEACT	_____
D004	Arsenic (As)	268.43(a)	268.41(a)	_____
D005	Barium (Ba)	268.43(a)	268.41(a)	_____
D006	Cadmium (Cd)	268.43(a)	268.41(a)	_____
D007	Chromium (Cr)	268.43(a)	268.41(a)	_____
D008	Lead (Pb)	268.43(a)	268.41(a)	_____
D009:	Low Mercury Subcategory (<260 ppm Hg)	268.43(a)	268.41(a)	_____
	High Mercury Subcategory (>=260 ppm Hg)	268.43(a)	268.42(a) RMERC	_____
D010	Selenium (Se)	268.43(a)	268.41(a)	_____
D011	Silver (Ag)	268.43(a)	268.41(a)	_____
Other Codes	See Attachment for supplemental list	_____	_____	_____

Generator Name: SILVANUS PRODUCTS INC

EPA ID: MOD092351642

Generator Representative Signature: \_\_\_\_\_

Name & Title of Representative: \_\_\_\_\_

Safety-Kleen Sample Number: 233416

Control Number: 0118948

NOTE: The USEPA has not determined treatment standards for the following EPA listed wastes: \_\_\_\_\_

PREQUALIFICATION EVALUATION  
MANIFESTING INFORMATION

REVISED : 11/25/91

FLUID RECOVERY  
SILVANUS PRODUCTS INCCONTROL#: 0118948-4  
SAMPLE# : 233416

REQUIRED MANIFEST FORM: MO

Safety-Kleen Corp. provides this manifesting information for instructional purposes only. All the information is believed to be accurate, but is known to be incomplete. Federal and State regulations and the instructions on the manifest form should be consulted for complete information. In addition, certain variations may be allowed by regulations, but need to be approved by a Safety-Kleen representative prior to shipment.

UNIFORM HAZARDOUS WASTE MANIFEST	1. GENERATOR US EPA NO. <b>MOD092351642</b>	DOCUMENT NO. _____	2. PAGE _____	<u>UNDERLINED AREA ARE REQUIRED</u>
3. GENERATOR NAME AND MAILING ADDRESS <b>SILVANUS PRODUCTS INC 40 MERCHANT ST ATT VERNON SCHWENT ST GENEVIEVE MO 63670</b>			A. STATE MANIFEST DOCUMENT NUMBER _____	
4. GENERATOR PHONE (314) 883-3521			B. STATE GENERATORS ID <b>01659</b>	
5. TRANSPORTER 1 COMPANY NAME <b>SAFETY-KLEEN CORP.</b>	6. US EPA ID NUMBER _____		C. STATE TRANS ID _____	
7. TRANSPORTER 2 COMPANY NAME	8. US EPA ID NUMBER		D. TRANSPORTER PHONE - -	
9. FACILITY NAME AND SITE ADDRESS <b>SAFETY-KLEEN CORP STATE HWY 146 NEW CASTLE KY 40050</b>	10. US EPA ID NUMBER <b>KYD053348108</b>		E. STATE TRANS ID _____	
			F. TRANSPORTER PHONE - -	
			G. FACILITY STATE ID _____	
			H. FACILITY PHONE <b>502-845-2453</b>	
11. US DOT DESCRIPTION (INCLUDING ALL PARTS REQUIRED BY US DOT)			CONTAINER	I. WASTE NO
a. <b>RQ WASTE COMPOUND, CLEANING, LIQUID FLAMMABLE LIQUID NA1993 (F003)(ERG# 27)</b>			<b>DRUM OR BULK</b>	<b>F003</b>
b.				
J. ADDITIONAL DESCRIPTION FOR MATERIALS LISTED ABOVE  <b>D001</b>			K. HANDLING CODES FOR WASTES ABOVE  <b>S01/S02/T50</b>	
15. SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION				
<b>CONTROL NO 0118948-4 SAMPLE NO 233416 CUSTOMER NUMBER 5-030-01-9103 -FOR ALL SAFETY-KLEEN SHIPMENTS</b>				
<b>EMERG RESP# 708-888-4660 24 HR</b>				
SK-DOT NUMBERS A: 0001145 B:				
<b>NOTICE OF LAND DISPOSAL RESTRICTION OF WASTE IS REQUIRED</b>				



A C C E P T \* \* REVISED \* \*

A C C E P T

FLUID RECOVERY SERVICES  
SILVANUS PRODUCTS  
FIXER/DEVELOPER SOLUTION(NEUTRAL)

CONTROL #: 0000131370-3  
LAB #: 0000038506-7  
SURVEY #: 0000284360

CUSTOMER INFORMATION: 5030-01-9103

FEDERAL EPA ID: MOD092351642  
STATE EPA ID: 01659

SILVANUS PRODUCTS INC  
40 MERCHANT ST  
ST GENEVIEVE

MO 63670

ATTN: VERNON T SCHWENT

BRANCH: 503001 - CAPE GIRARDEAU

GENERATOR: SILVANUS PRODUCTS		S.I.C. NO:	
NATURE OF BUSINESS: MNFG SILKSCREEN		ST:	
FEDERAL EPA ID: MOD092351642 IL:		MO:	ID:
FACILITY ADDRESS: FOR MANIFEST		STATUS: SQG	
40 MERCHANT ST		BILLING:	
ATT VERNON SCHWENT			
ST GENEVIEVE		MO 63670	
GENERAL DESCRIPTION: FIXER/DEVELOPER SOLUTION(NEUTRAL)			
PROCESS DESCRIPTION: SCRAP			
GENERATION AMOUNT: 55 GALLONS PER YEAR			
AMOUNT ON HAND: 5 IN DRUMS			
SHIPPING FREQUENCY: WILL CALL IN DRUMS			
COLOR: BLACK PCT SOLIDS NOT SAMPLED: PH RANGE: 4-10			
LAYERS OR PHASES: ONE PHYSICAL STATE: LIQUID VISCOSITY: LOW			
MATERIAL COMPOSITION: VOL% CODE MAX TYPICAL			
AMMONIUM THIOSULFATE ATSF 8.00			
ETHYLENE GLYCOL EG 8.00			
HYDROQUINONE HQ 8.00			
OIL, PETROLEUM O			
WATER W 60.00			
POTASSIUM SULFITE 8.00			
SODIUM ACETATE 8.00			
ATTACHMENTS: MSDS			
RESTRICTED SUBSTANCES: NONE			
HAZARD CLASS: NUMBER: NEED ASSISTANCE			
EPA WASTE DESCRIPTION AND TREATMENT STANDARDS: RCRA HAZARDOUS WASTE: YES			
OTHER EPA WASTE CODES: D001			
P.O. NO: 28578 TYPE OF SAMPLE: GRAB # OF DRUMS SAMPLED: 0 TAKEN BY: SK REP			
NAME: VERNON T SCHWENT TITLE: PRODUCTION MGR 03/03/1992 (314) 883-3521			

REVISION: 04/14/1992 13:06 LORAIN GARCIA  
WASTE IS D001 DUE TO OIL PER LETTER.

CORPORATE REVIEWS: DISPOSITION REVIEWER DATE				POSSIBLE FACILITIES:		PRICING CODE: FA	
TECHNICAL:	ACCEPT	CAC	03/19/92	658	654		
REGULATORY:	ACCEPT	CAC	03/19/92				
OPERATING:	ACCEPT	JWH	03/19/92	000161			

APPROVED FACILITIES:

(658) SAFETY-KLEEN CORP (654) SAFETY-KLEEN CORP  
STATE HWY 146 633 EAST 138TH ST  
NEW CASTLE KY 40050 DOLTON IL 60419  
FED EPA#: KYD053348108 ILD980613913  
STATE EPA#: 0310690006  
TELEPHONE: 502/845-2453 708/849-4850  
STATE CODE: 000161

APPROVD 0003002 DRUM OR BULK  
DOT-EPA RQ WASTE FLAMMABLE LIQUID, N.O.S.  
DESC. (OIL)

0000888 NOT FOR MANIFEST  
PROPER SHIPPING DESCRIPTION WAS BASED ON  
SURVEY INFORMATION RATHER THAN ANALYSIS.  
SEE COMMENTS FOR DETAILS AND NOTICES.

CLASS 3 UN1993 PG III (D001)(ERG#27)

COMMENTS: OK FOR HAZARDOUS WASTE WATER ONLY, FRS PART 82104-A.  
D001 BASED ON SURVEY.

EPA WASTE CODES  
D001

THIS SERVES AS NOTICE PER, 40CFR264.12(B), THAT THE FACILITY(IES) NOTED ABOVE  
HAS THE APPROPRIATE PERMITS AND IS WILLING TO RECEIVE THE MATERIAL DESCRIBED.

80918 - R2271 (RUN 04/14/92) PREQUALIFICATION EVALUATION - BRANCH INDUSTRIAL SERVICES PAGE 2  
PROJECT: PREQUALIFICATION GENERATOR SURVEY COMPLETED: 03/20/92  
BRANCH/SUBMITTER: 503001 REVISED: 04/14/92  
CAPE GIRARDEAU

A C C E P T

\* \* REVISED \* \*

A C C E P T

FLUID RECOVERY SERVICES  
SILVANUS PRODUCTS  
FIXER/DEVELOPER SOLUTION(NEUTRAL)

CONTROL #: 0000131370-3  
LAB #: 0000036506-7  
SURVEY #: 0000284360

CONTINUED ON NEXT PAGE

ACCEPT \*\* REVISED \*\*  
 FLUID RECOVERY SERVICES  
 SILVANUS PRODUCTS  
 FIXER/DEVELOPER SOLUTION (NEUTRAL)

ACCEPT  
 CONTROL #: 0131370-3  
 SURVEY #: 284360

#### GENERAL ANALYSIS OF TOTAL SAMPLE

COLOR : BROWN/DK GRAY  
 WATER CONTENT : 76.2 WT%  
 NON-VOLATILE RESIDUE : 20.8 WT% DESCRIPTION: SOLID  
 FLAMMABILITY :  
 FLAMMABILITY : NO FLASH AT 102 F BY SETAFLASH  
 PH : EXTRACT BY METER 8.7  
 RADIOACTIVITY : NONE DETECTED

#### FUEL EVALUATION OF TOTAL SAMPLE

HEAT CONTENT: 1300 BTU/LB  
 TOTAL CHLORINE CL: 0.1 WT% ASH UPON COMBUSTION: 7.5 WT%  
 TOTAL BROMINE BR: < 0.1 WT% TOTAL SULFUR S: 1.6 WT%  
 TOTAL FLUORINE F: < 0.1 WT%

#### GENERAL COMPOSITION:

	SPECIFIC GRAVITY	VISCOSITY (CENTIPOISE)	GENERAL COMPOSITION BY:	
			APPEARANCE (VOL%)	TOTAL (WT %)
AQUEOUS PHASE (FREE WATER)			0.0	0.0
ORGANIC PHASE (FEEDSTOCK)			94.0	94.0
BOTTOM SLUDGE (SEMISOLIDS)			0.0	0.0
BOTTOM SOLID (SETTLED SOLIDS)			6.0	6.0
TOTAL	1.090	< 50 CPS	100.0	100.0

#### SPECIFIC COMPOSITION OF TOTAL SAMPLE

		COMPOSITION OF:	
		TOTAL SAMPLE (WT%)	TOTAL SAMPLE (WT%)
WATER CONTENT		76.2	76.2
NON-VOLATILE RESIDUE	DESCRIPTION: SOLID	20.8	20.8
VOLATILE ORGANICS BY DIFFERENCE		3.0	3.0
TOTAL		100.0	100.0

#### VOLATILE ORGANIC COMPOSITION OF TOTAL SAMPLE BY GAS CHROMATOGRAPHY

SAMPLE PREPARATION METHODS: METHANOL-EXTRACT, CS2-EXTRACT  
 DETECTION METHODS : FID, FID, MASS-SPEC

COMPOUND NAME	COMPOSITION OF:		VOLATILE ORGANICS (WT%)	VOLATILE ORGANICS (WT%)	TOTAL SAMPLE (WT%)
	CODE	CAS NUMBER			
TOTAL OTHERS (<1.0% EACH)	TO	0-05-5	54.6	54.6	1.6
BENZOIC ACID	BNZA	65-85-0	39.9	39.9	1.2
PROPYLENE GLYCOL PHENYL ETHER	PGPH	4169-04-4	5.5	5.5	0.2
TOTAL			100.0	100.0	3.0

#### SUMMARY OF VOLATILE ORGANIC COMPOSITION BY COMPOUND CHEMICAL CLASS WT%:

ALCOHOLS  
 AROMATIC HYDROCARBONS  
 ESTERS  
 GLYCOL ETHERS 5.5  
 KETONES  
 ALIPHATIC HYDROCARBONS  
 CHLORINATED SOLVENTS  
 ETHERS  
 INHIBITORS  
 NITROGEN COMPOUNDS

#### SPECIFIC ORGANIC COMPOSITION

POLYCHLORINATED BIPHENYLS (PCBS): NONE DETECTED <  
 SAFETY-KLEEN REGULATED COMPOUNDS: DETECTED

#### ADDITIONAL ANALYTICAL INFORMATION: TOXICS: SO2 < 1% BY GCMS

LABORATORY REVIEW: R	TRACKING INFORMATION:	DATE	FACILITY
LEVEL: SEG CODE: RELEASED: 03/20/92	SURVEY RECEIVED :	03/10/92	SK TECHNICAL CEN
LAB REVIEWERS: AJ AJ ANALYZED: 03/19/92	SAMPLE RECEIVED :	03/06/92	
LOW BTU/WATER ESTIMATED BY DIFFERENCE/HIGH WATER.	RESAMPLE SHIPPED :		
	RESAMPLE RECEIVED:		

THE ANALYSES CONTAINED HEREIN ARE PERFORMED SOLELY FOR THE PURPOSE OF QUALIFYING THE ANALYZED MATERIALS FOR ACCEPTANCE BY SAFETY-KLEEN IN ACCORDANCE WITH ITS PERMITS AND PROCESSING CAPABILITY.

NOTICE OF LAND DISPOSAL RESTRICTION OF WASTE

TO: SAFETY-KLEEN CORP EPA ID NO: ILD980613913  
633 EAST 138TH ST  
DOLTON IL 60419

Under manifest number \_\_\_\_\_ line number \_\_\_\_\_ (enter 11a, 11b, 11c, OR 11d) the Generator noted below is shipping to you a waste determined to be restricted under 40 CFR Part 268. In accordance with 40 CFR 268.7, the generator hereby provides notice that the waste is restricted and the EPA waste code and the appropriate treatment standards are as follows:

EPA Waste Codes: **D001**

F001-F005 Spent Solvents Regulated Hazardous Constituent	TREATMENT STANDARDS (mg/l)		Check All That Apply
	Wastewater w/Solvents	All Other Solvent Wastes	
Acetone	0.05	0.59	_____
Benzene	0.07	3.7	_____
n-Butyl alcohol	5.0	5.0	_____
Carbon disulfide	1.05	4.81	_____
Carbon tetrachloride	0.05	0.96	_____
Chlorobenzene	0.15	0.05	_____
Cresols (and cresylic acid)	2.82	0.75	_____
Cyclohexanone	0.125	0.75	_____
1,2-Dichlorobenzene	0.68	0.125	_____
Ethyl acetate	0.05	0.75	_____
Ethyl benzene	0.05	0.053	_____
Ethyl ether	0.05	0.75	_____
Isobutanol	5.0	5.0	_____
Methanol	0.25	0.75	_____
Methylene chloride	0.2	0.96	_____
Methylene chloride(from Pharm. Industry)	0.44	0.96	_____
Methyl ethyl ketone	0.05	0.75	_____
Methyl isobutyl ketone	0.05	0.33	_____
Nitrobenzene	0.65	0.125	_____
Pyridine	1.12	0.33	_____
Tetrachloroethylene	0.079	0.05	_____
Toluene	1.12	0.33	_____
1,1,1-Trichloroethane	1.05	0.41	_____
1,1,2-Trichloroethane	0.03	7.6	_____
1,1,2-Trichloro- 1,2,2-trifluoroethane	1.05	0.96	_____
Trichlorethylene	0.062	0.091	_____
Trichlorofluoromethane	0.05	0.96	_____
Xylene	0.05	0.15	_____

California List Prohibited Wastes	Level (mg/l)	Treatment Standard	
Halogenated Organic Compounds	1000.0	Incineration	_____
Arsenic (As) Nonwastewaters	500.0	None	_____
Mercury (Hg) Nonwastewaters	20.0	None	_____
Nickel (Ni)	134.0	None	_____
Thallium (Tl)	130.0	None	_____
Chlorinated Biphenyls (PCB's)	50.0	Incineration	_____

These treatment standards do not preclude solvent recovery prior to disposal. Subsequent disposal of unrecovered waste is subject to these standards.

Waste Descriptions and/or Treatment Subcategory		Treatment Standards Reference in 40 CFR and Technology Codes for 40 CFR 268.42(a)		Check All That Apply
Waste Code	Description	Wastewaters	Nonwastewaters	
D001:	Wastewaters (<1.0 wt% TOC and TSS)	268.42(a) DEACT	NA	_____
	Low TOC Ignitable Liquids (<10 wt% TOC)	NA	268.42(a) DEACT	_____
	High TOC Ignitable Liquids (>10 wt% TOC)	NA	268.42(a) RORGS, FSUBS, or INCIN	<u>X</u>
D002	Corrosives, all subcategories & CA list	268.42(a) DEACT	268.42(a) DEACT	_____
D004	Arsenic (As)	268.43(a)	268.41(a)	_____
D005	Barium (Ba)	268.43(a)	268.41(a)	_____
D006	Cadmium (Cd)	268.43(a)	268.41(a)	_____
D007	Chromium (Cr)	268.43(a)	268.41(a)	_____
D008	Lead (Pb)	268.43(a)	268.41(a)	_____
D009:	Low Mercury Subcategory (<260 ppm Hg)	268.43(a)	268.41(a)	_____
	High Mercury Subcategory (>=260 ppm Hg)	268.43(a)	268.42(a) RMERC	_____
D010	Selenium (Se)	268.43(a)	268.41(a)	_____
D011	Silver (Ag)	268.43(a)	268.41(a)	_____
Other Codes See attachment for supplemental list		_____	_____	_____

Generator Name: SILVANUS PRODUCTS EPA ID: MOD092351642  
 Generator Representative Signature: \_\_\_\_\_  
 Name & Title of Representative: \_\_\_\_\_  
 Safety-Kleen Sample Number: 284360 Control Number: 0131370

NOTE: The USEPA has not determined treatment standards for the new TCLP EPA Waste Numbers: D018 through D043.

NOTICE OF LAND DISPOSAL RESTRICTION OF WASTE

TO: SAFETY-KLEEN CORP EPA ID NO: KYD053348108  
STATE HWY 146  
NEW CASTLE KY 40050

Under manifest number \_\_\_\_\_ line number \_\_\_\_\_ (enter 11a, 11b, 11c, OR 11d) the Generator noted below is shipping to you a waste determined to be restricted under 40 CFR Part 268. In accordance with 40 CFR 268.7, the generator hereby provides notice that the waste is restricted and the EPA waste code and the appropriate treatment standards are as follows:

EPA Waste Codes: **D001**

<u>F001-F005 Spent Solvents</u>	<u>TREATMENT STANDARDS (mg/l)</u>		<u>Check All That Apply</u>
<u>Regulated Hazardous Constituent</u>	<u>Wastewater w/Solvents</u>	<u>All Other Solvent Wastes</u>	
Acetone	0.05	0.59	_____
Benzene	0.07	3.7	_____
n-Butyl alcohol	5.0	5.0	_____
Carbon disulfide	1.05	4.81	_____
Carbon tetrachloride	0.05	0.96	_____
Chlorobenzene	0.15	0.05	_____
Cresols (and cresylic acid)	2.82	0.75	_____
Cyclohexanone	0.125	0.75	_____
1,2-Dichlorobenzene	0.68	0.125	_____
Ethyl acetate	0.05	0.75	_____
Ethyl benzene	0.05	0.053	_____
Ethyl ether	0.05	0.75	_____
Isobutanol	5.0	5.0	_____
Methanol	0.25	0.75	_____
Methylene chloride	0.2	0.96	_____
Methylene chloride(from Pharm. Industry)	0.44	0.96	_____
Methyl ethyl ketone	0.05	0.75	_____
Methyl isobutyl ketone	0.05	0.33	_____
Nitrobenzene	0.65	0.125	_____
Pyridine	1.12	0.33	_____
Tetrachloroethylene	0.079	0.05	_____
Toluene	1.12	0.33	_____
1,1,1-Trichloroethane	1.05	0.41	_____
1,1,2-Trichloroethane	0.03	7.6	_____
1,1,2-Trichloro-1,2,2-trifluoroethane	1.05	0.96	_____
Trichlorethylene	0.062	0.091	_____
Trichlorofluoromethane	0.05	0.96	_____
Xylene	0.05	0.15	_____

<u>California List Prohibited Wastes</u>	<u>Level (mg/l)</u>	<u>Treatment Standard</u>	
Halogenated Organic Compounds	1000.0	Incineration	_____
Arsenic (As) Nonwastewaters	500.0	None	_____
Mercury (Hg) Nonwastewaters	20.0	None	_____
Nickel (Ni)	134.0	None	_____
Thallium (Tl)	130.0	None	_____
Chlorinated Biphenyls (PCB's)	50.0	Incineration	_____

These treatment standards do not preclude solvent recovery prior to disposal. Subsequent disposal of unrecovered waste is subject to these standards.

<u>Waste Descriptions and/or Treatment Subcategory</u>		<u>Treatment Standards Reference in 40 CFR and Technology Codes for 40 CFR 268.42(a)</u>		<u>Check All That Apply</u>
<u>Waste Code</u>	<u>Description</u>	<u>Wastewaters</u>	<u>Nonwastewaters</u>	
D001:	Wastewaters (<1.0 wt% TOC and TSS)	268.42(a) DEACT	NA	_____
	Low TOC Ignitable Liquids (<10 wt% TOC)	NA	268.42(a) DEACT	_____
	High TOC Ignitable Liquids (>10 wt% TOC)	NA	268.42(a) RORGS, FSUBS, or INCIN	<u>X</u>
D002	Corrosives, all subcategories & CA list	268.42(a) DEACT	268.42(a) DEACT	_____
D004	Arsenic (As)	268.43(a)	268.41(a)	_____
D005	Barium (Ba)	268.43(a)	268.41(a)	_____
D006	Cadmium (Cd)	268.43(a)	268.41(a)	_____
D007	Chromium (Cr)	268.43(a)	268.41(a)	_____
D008	Lead (Pb)	268.43(a)	268.41(a)	_____
D009:	Low Mercury Subcategory (<260 ppm Hg)	268.43(a)	268.41(a)	_____
	High Mercury Subcategory (>=260 ppm Hg)	268.43(a)	268.42(a) RMERC	_____
D010	Selenium (Se)	268.43(a)	268.41(a)	_____
D011	Silver (Ag)	268.43(a)	268.41(a)	_____
Other Codes See attachment for supplemental list		_____	_____	_____

Generator Name: SILVANUS PRODUCTS EPA ID: MOD092351642  
 Generator Representative Signature: \_\_\_\_\_  
 Name & Title of Representative: \_\_\_\_\_  
 Safety-Kleen Sample Number: 284360 Control Number: 0131370

NOTE: The USEPA has not determined treatment standards for the new TCLP EPA Waste Numbers: D018 through D043.

80918 - R2271 (RUN 02/20/92)  
PROJECT: PREQUALIFICATION  
BRANCH/SUBMITTER: 503001  
CAPE GIRARDEAU

PREQUALIFICATION EVALUATION - BRANCH INDUSTRIAL SERVICES  
GENERATOR SURVEY

PAGE 1

COMPLETED: 11/25/91

REVISED: 02/20/92

OFFSET PRINTER  
WASTE WATER

A C C E P T

\* \* REVISED \* \*



A C C E P T

FLUID RECOVERY SERVICES  
SILVANUS PRODUCTS INC  
OFFSET PRINTER WASTE WATER

CONTROL #: 0000118944-5  
LAB #: 0000028749-3  
SURVEY #: 0000233415

CUSTOMER INFORMATION: 5030-01-9103

FEDERAL EPA ID: MOD092351642  
STATE EPA ID: 01659

SILVANUS PRODUCTS INC  
40 MERCHANT ST  
ST GENEVIEVE

MO 63670

ATTN: VERNON T SCHWENT

BRANCH: 503001 - CAPE GIRARDEAU

GENERATOR: SILVANUS PRODUCTS INC  
NATURE OF BUSINESS: MNFG SILKSCREEN  
FEDERAL EPA ID: IL:

S.I.C. NO: MO: ST: ID: STATUS: SQG

FACILITY ADDRESS: FOR MANIFEST

BILLING:

40 MERCHANT ST  
ATT VERN SCHWENT  
ST GENEVIEVE

MO 63670

GENERAL DESCRIPTION: OFFSET PRINTER WASTE WATER

PROCESS DESCRIPTION: FROM CLEANUP

GENERATION AMOUNT: 55 GALLONS PER QUARTER

AMOUNT ON HAND: 55 IN DRUMS

SHIPPING FREQUENCY: 4 WEEK

IN DRUMS

COLOR: GREY

PCT SOLIDS NOT SAMPLED:

PH RANGE:

4-10

LAYERS OR PHASES: ONE

PHYSICAL STATE: LIQUID

VISCOSITY: LOW

MATERIAL COMPOSITION: VOL%

CODE	MAX	TYPICAL
S		10.00
W		90.00

ATTACHMENTS: NONE

RESTRICTED SUBSTANCES: NONE

HAZARD CLASS:

NUMBER:

NEED ASSISTANCE

EPA WASTE DESCRIPTION AND TREATMENT STANDARDS: RCRA HAZARDOUS WASTE: YES

LISTED EPA WASTE CODES: F003

P.O. NO: 27192 TYPE OF SAMPLE: COMPOSITE # OF DRUMS SAMPLED: 1 TAKEN BY: SK REP

NAME: VERNON T SCHWENT

TITLE: PRODUCTION MANAGER

10/28/1991 (314) 883-3521

COMMENTS: L#28749-3

CORPORATE REVIEWS:	DISPOSITION	REVIEWER	DATE
TECHNICAL:	ACCEPT	AAD	11/25/91
REGULATORY:	ACCEPT	JHP	11/25/91
OPERATING:	ACCEPT	JWH	11/25/91

POSSIBLE FACILITIES: PRICING CODE: FA  
658

APPROVED FACILITIES:

(658) SAFETY-KLEEN CORP  
STATE HWY 146  
NEW CASTLE KY 40050

FED EPA#: KYD053348108

STATE EPA#:

TELEPHONE: 502/845-2453

STATE CODE:

APPROVD 0001055 DRUM OR BULK  
DOT-EPA NOT REGULATED BY USDOT OR USEPA.  
DESC. DESCRIPTION SHOULD BE REFLECTIVE  
OF THE WASTE STREAM.

0000777 NOT FOR MANIFEST  
PROPER SHIPPING DESCRIPTION WAS BASED  
ON THIS SINGLE ANALYSIS. GENERATOR MUST  
CERTIFY THAT SHIPMENT IS NOT HAZARDOUS.

EPA WASTE CODES  
NONE

COMMENTS: OK FOR WASTE WATER ONLY. FRS PART 82104-A. SEE CONTROL  
NO. 126814 FOR TCLP

THIS SERVES AS NOTICE PER 40CFR264.12(B), THAT THE FACILITY(IES) NOTED ABOVE  
HAS THE APPROPRIATE PERMITS AND IS WILLING TO RECEIVE THE MATERIAL DESCRIBED.

BRANCH/SUBMITTER: 503001  
MIKE DOWNEYCOMPLETED: 11/25/91  
REVISED: 02/20/92

A C C E P T

\* \* REVISED \* \*

FLUID RECOVERY SERVICES  
SILVANUS PRODUCTS INC  
OFFSET PRINTER WASTE WATER

A C C E P T

CONTROL #: 0118944-5  
SURVEY #: 233415

## GENERAL ANALYSIS OF TOTAL SAMPLE

COLOR : LT GRAY  
 WATER CONTENT : 99.5 WT%  
 NON-VOLATILE RESIDUE: 0.0 WT% DESCRIPTION: DRY  
 FLAMMABILITY : NO FLASH AT 142 F BY SETAFLASH  
 FLAMMABILITY : NO FLASH AT 102 F BY SETAFLASH  
 PH : EXTRACT BY METER 7.2  
 RADIOACTIVITY : NONE DETECTED  
 COMMENTS: 2% FLOATING & BOTTOM SOLIDS

## FUEL EVALUATION OF TOTAL SAMPLE

HEAT CONTENT: < 5000 BTU/LB  
 TOTAL HALOGENS: < 5.0 WT%  
 ASH UPON COMBUSTION: < 5.0 WT%

## GENERAL COMPOSITION:

	SPECIFIC GRAVITY	VISCOSITY (CENTIPOISE)	GENERAL COMPOSITION BY:	
			APPEARANCE (VOL%)	TOTAL (WT%)
AQUEOUS PHASE (FREE WATER)			100.0	100.0
ORGANIC PHASE (FEEDSTOCK)			0.0	0.0
BOTTOM SLUDGE (SEMISOLIDS)			0.0	0.0
BOTTOM SOLID (SETTLED SOLIDS)			0.0	0.0
TOTAL	1.000	< 50 CPS	100.0	100.0

## SPECIFIC COMPOSITION OF TOTAL SAMPLE

	COMPOSITION OF:	TOTAL SAMPLE (WT%)	TOTAL SAMPLE (WT%)
WATER CONTENT		99.5	99.5
NON-VOLATILE RESIDUE	DESCRIPTION: DRY	0.0	0.0
VOLATILE ORGANICS BY DIFFERENCE		0.5	0.5
TOTAL		100.0	100.0

## VOLATILE ORGANIC COMPOSITION OF TOTAL SAMPLE BY GAS CHROMATOGRAPHY

SAMPLE PREPARATION METHODS: NEAT  
 DETECTION METHODS : FID, FID

COMPOUND NAME	COMPOSITION OF:	VOLATILE ORGANICS (WT%)	VOLATILE ORGANICS (WT%)	TOTAL SAMPLE (WT%)
NO VOLATILE ORGANICS DETECTED (<0.1% EACH)	CODE CAS NUMBER NONE 0-62-4	100.0	100.0	0.5
TOTAL		100.0	100.0	0.5

## SUMMARY OF VOLATILE ORGANIC COMPOSITION BY COMPOUND CHEMICAL CLASS WT%:

ALCOHOLS	ALIPHATIC HYDROCARBONS
AROMATIC HYDROCARBONS	CHLORINATED SOLVENTS
ESTERS	ETHERS
GLYCOL ETHERS	INHIBITORS
KETONES	NITROGEN COMPOUNDS

## SPECIFIC ORGANIC COMPOSITION

POLYCHLORINATED BIPHENYLS (PCBS): NONE DETECTED &lt;

## LABORATORY REVIEW: R

LEVEL: SEG CODE: RELEASED: 11/25/91  
 LAB REVIEWERS: MS MS ANALYZED: 11/25/91  
 HIGH WATER.

## TRACKING INFORMATION:

DATE FACILITY  
 SURVEY RECEIVED : 11/14/91 SK TECHNICAL CEN  
 SAMPLE RECEIVED : 10/31/91  
 RESAMPLE SHIPPED :  
 RESAMPLE RECEIVED:

THE ANALYSES CONTAINED HEREIN ARE PERFORMED SOLELY FOR THE PURPOSE OF QUALIFYING THE ANALYZED MATERIALS FOR ACCEPTANCE BY SAFETY-KLEEN IN ACCORDANCE WITH ITS PERMITS AND PROCESSING CAPABILITY.

REVISION NOTES \*\* (02/20/92) \*\*  
 (0001) REVISED TO ACCEPT.CC

PREQUALIFICATION EVALUATION  
MANIFESTING INFORMATION

REVISED : 02/20/92

FLUID RECOVERY  
SILVANUS PRODUCTS INCCONTROL#: 0118944-5  
SAMPLE# : 233415

REQUIRED MANIFEST FORM: MO

Safety-Kleen Corp. provides this manifesting information for instructional purposes only. All the information is believed to be accurate, but is known to be incomplete. Federal and State regulations and the instructions on the manifest form should be consulted for complete information. In addition, certain variations may be allowed by regulations, but need to be approved by a Safety-Kleen representative prior to shipment.

UNIFORM HAZARDOUS WASTE MANIFEST	1. GENERATOR US EPA NO. <b>MOD092351642</b>	DOCUMENT NO. _____	2. PAGE _____	<u>UNDERLINED AREAS ARE REQUIRED</u>
3. GENERATOR NAME AND MAILING ADDRESS <b>SILVANUS PRODUCTS INC 40 MERCHANT ST ATT VERN SCHWENT ST GENEVIEVE MO 63670</b>			A. STATE MANIFEST DOCUMENT NUMBER _____	
4. GENERATOR PHONE (314) 883-3521			B. STATE GENERATORS ID <b>01659</b>	
5. TRANSPORTER 1 COMPANY NAME <b>SAFETY-KLEEN CORP.</b>	6. US EPA ID NUMBER _____		C. STATE TRANS ID _____	
7. TRANSPORTER 2 COMPANY NAME	8. US EPA ID NUMBER		D. TRANSPORTER PHONE - -	
9. FACILITY NAME AND SITE ADDRESS <b>SAFETY-KLEEN CORP STATE HWY 146 NEW CASTLE KY 40050</b>	10. US EPA ID NUMBER <b>KYD053348108</b>		E. STATE TRANS ID _____	
		F. TRANSPORTER PHONE - -		
		G. FACILITY STATE ID _____		
		H. FACILITY PHONE <b>502-845-2453</b>		
11. US DOT DESCRIPTION (INCLUDING ALL PARTS REQUIRED BY US DOT)			CONTAINER	I. WASTE NO
a. NOT REGULATED BY USDOT OR USEPA. DESCRIPTION SHOULD BE REFLECTIVE OF THE WASTE STREAM.			DRUM OR BULK	<u>NONE</u>
b. PROPER SHIPPING DESCRIPTION WAS BASED ON THIS SINGLE ANALYSIS. GENERATOR MUST CERTIFY THAT SHIPMENT IS NOT HAZARDOUS.			NOT FOR MANIFEST	
J. ADDITIONAL DESCRIPTION FOR MATERIALS LISTED ABOVE _____			K. HANDLING CODES FOR WASTES ABOVE <u>S01/S02/T50</u>	
15. SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION				

CONTROL NO 0118944-5 SAMPLE NO 233415 CUSTOMER NUMBER 5-030-01-9103 -FOR ALL SAFETY-KLEEN SHIPMENTS

EMERG RESP# 708-888-4660 24 HR

SK-DOT NUMBERS A: 0001055 B: 0000777

NO NOTICE OF LAND DISPOSAL RESTRICTION OF WASTE REQUIREMENT CAN BE DETERMINED FROM THIS ANALYSIS



OFFSET PRINTER  
WASTE WATER

**Safety-Kleen Corporation**  
**TCLP Analysis**

**Generator**

Silvanus Products Inc  
40 Merchant Street  
St. Genevieve, MO 63670

Report Date: 02/19/92

Work Order #: 92-01-065  
Control #: 126814-9  
Survey #: 227376

**Attention:**

Vernon Schwert

**Customer Representative:**

503001, Bob Davie

Dear Sir:

The enclosed Safety-Kleen TCLP analysis of water for Silvanus Products Inc. DOES NOT show TCLP characteristic waste codes.

Currently the TCLP Laboratory tests for EPA waste codes D004-D043. For a material to be classified as non-hazardous, the generator must determine that the waste is not defined as a "listed" hazardous waste, not mixed with a "listed" hazardous waste, not derived from a "listed" hazardous waste, and obtain analytical information for EPA waste code(s) D001 (ignitability), D002 (corrosivity), and D003 (reactivity). The TCLP laboratory itself does not test for these waste codes. This information can be obtained through a prequalification analysis.

The columns of concern in the TCLP analytical results are "regulatory limits" and "final results", both printed in bold. A comment at the end of this TCLP analysis indicates if the analysis is TCLP characteristic. If a corresponding preship number was provided, the original preship will be revised with respect to a hazardous or non hazardous determination.

Please do not hesitate to call Tanja Duda (x7354) if there are any questions.

Sincerely,

Mark Hartwig  
TCLP Laboratory Manager

Allan A. Manteuffel Technical Center

P.O. Box 92050  
Elk Grove Village, IL  
60009-0050

12555 W. Old Higgins Rd.  
Elk Grove Village, IL 60007  
312/221-0700

TCLP METALS RESULTS							Phase: Total
EPA WASTE #	ANALYTE	DATE ANALYZED	REG LIMIT (mg/L)	PQL (mg/L)	INSTRUMENT RESULT (mg/L)	MTX SPK REC (%)	FINAL RESULT (mg/L)
D004	Arsenic	02/04/92	5.00	0.0200	< 0.0200	94.0	< 0.0200
D005	Barium	02/05/92	100	0.400	1.11	97.0	1.11
D006	Cadmium	02/06/92	1.00	0.0100	< 0.0100	92.0	< 0.0100
D007	Chromium	02/05/92	5.00	0.160	< 0.160	114	< 0.160
D008	Lead	02/05/92	5.00	0.0400	< 0.0400	98.0	< 0.0400
D009	Mercury	02/06/92	0.200	0.00200	< 0.00200	105	< 0.00200
D010	Selenium	02/04/92	1.00	0.0300	< 0.0300	94.0	< 0.0300
D011	Silver	02/04/92	5.00	0.00800	< 0.00800	90.0	< 0.00800

TCLP Volatile Organic Compounds							Phase: Total
EPA WASTE #	ANALYTE	DATE ANALYZED	REG LIMIT (mg/L)	PQL (mg/L)	INSTRUMENT RESULT (mg/L)	MTX SPK REC (%)	FINAL RESULT (mg/L)
		02/14/92					
D018	Benzene		0.500	0.100	< 0.100	96.0	< 0.100
D019	Carbon tetrachloride		0.500	0.100	< 0.100	110	< 0.100
D021	Chlorobenzene		100	0.100	< 0.100	102	< 0.100
D022	Chloroform		6.00	0.100	< 0.100	110	< 0.100
D027	Dichlorobenzene, 1,4-		7.50	0.100	< 0.100	86.0	< 0.100
D028	Dichloroethane, 1,2-		0.500	0.100	< 0.100	112	< 0.100
D029	Dichloroethylene, 1,1-		0.700	0.100	< 0.100	74.0	< 0.135
D035	Methyl Ethyl Ketone		200	0.500	< 0.500	78.0	< 0.641
D039	Tetrachloroethylene		0.700	0.100	< 0.100	102	< 0.100
D040	Trichloroethylene		0.500	0.100	< 0.100	104	< 0.100
D043	Vinyl Chloride		0.200	0.200	< 0.200	160	< 0.200

TCLP Base/Neutral/Acids Results							Phase: Total
EPA WASTE #	ANALYTE	DATE ANALYZED	REG LIMIT (mg/L)	PQL (mg/L)	INSTRUMENT RESULT (mg/L)	MTX SPK REC (%)	FINAL RESULT (mg/L)
		02/10/92					
D023	Cresol, o-		200	0.100	< 0.100	56.0	< 0.179
D025	Cresol, p- & m-		200	0.100	< 0.100	62.0	< 0.161
D030	Dinitrotoluene		0.130	0.100	< 0.100	62.0	< 0.161
D032	Hexachlorobenzene		0.130	0.100	< 0.100	66.0	< 0.152
D033	Hexachlorobutadiene		0.500	0.100	< 0.100	40.0	< 0.250
D034	Hexachloroethane		3.00	0.100	< 0.100	59.0	< 0.169
D036	Nitrobenzene		2.00	0.100	< 0.100	70.0	< 0.143
D037	Pentachlorophenol		100	0.500	< 0.500	45.0	< 1.11
D038	Pyridine		5.00	0.200	< 0.200	22.0	< 0.909
D041	2,4,5-Trichlorophenol		400	0.100	< 0.100	56.0	< 0.179
D042	2,4,6-Trichlorophenol		2.00	0.100	< 0.100	75.0	< 0.133

Sample Handling Dates/Times:

Date Sampled: 01/23/92 11:20  
Date Received: 01/24/92  
Date Reported: 02/19/92

Extraction/Digestion Dates:

Bottle Leach: NR \*  
ZHE Leach: NR \*  
BNA Leach: 02/03/92

Sample Composition:

Percent Solids: 2.68%  
Percent Dry Solids: 0.03%

Report Comments

Final result of an analyte is amount detected for the analyte corrected for its matrix spike recovery that is below 80%. (No correction will be made if the matrix spike recovery is above 80%.)

# of Phases: 1

Sample description: Water

\*: No leaching required.

Requested TCLP analysis does not show any characteristics. Refer to S# 233415, C# 118944-5 for corresponding preship. Refer to above data summary for details.

Reviewed By / Date:

Mark A. Hartung 2/19/92

Corporate Reviewed By / Date:

Cathy Chelle 2/20/92



SILK SCREENING  
WASTE WATER

SK SAMPLE #: 227280  
SK CONTROL #: 118508-1  
WORK ORDER #: 91-11-002  
# OF PHASES: 1

December 5, 1991

Bob Davie  
Safety-Kleen Corp.  
Route 2, Box 549-D  
Cape Girardeau, MO 63701

Dear Bob:

The enclosed is a Safety-Kleen TCLP analysis.

Currently the TCLP Laboratory tests for EPA waste codes D004-D043. For a material to be classified as non-hazardous, analytical information for EPA waste code(s) D001 (ignitability), D002 (corrosivity), and D003 (reactivity) is also required. The TCLP laboratory itself does not test for these waste codes. This information can be obtained through a preship analysis.

The columns of concern in the TCLP analytical results are column 4 (regulatory limits) and column 8 (final results). A comment at the end of this TCLP analysis indicates if the analysis is TCLP characteristic. If a corresponding preship number was provided, the original preship will be revised with respect to a hazardous or non hazardous determination.

Please don't hesitate to call Tammy Smith (X7363), or Tanja Duda (X7354) if there are any questions.

Sincerely,

Mark Hartwig  
TCLP Laboratory Manager

MH:jt

Allan A. Manteuffel Technical Center

P.O. Box 92050  
Elk Grove Village, IL  
60009-2050

12555 W. Old Higgins Rd.  
Elk Grove Village, IL 60007  
Telephone: 312/694-2700  
Fax: 312/694-2733

TABLE 2  
TOXICITY CHARACTERISTIC CONTAMINANTS AND REGULATORY LEVELS

EPA hazardous waste number	Contaminant	Chronic toxicity reference level (mg/L)	Basis*	Regulatory level (mg/L) <sup>†</sup>
D004	Arsenic	0.05	MCL	5.0
D005	Barium	1.0	MCL	100
D018	Benzene	0.005	MCL	0.5
D006	Cadmium	0.01	MCL	1.0
D019	Carbon tetrachloride	0.005	MCL	0.5
D020	Chlordane	0.0003	RSD	0.03
D021	Chlorobenzene	1	RfD	100.0
D022	Chloroform	0.06	RSD	6.0
D007	Chromium	0.05	MCL	5.0
D023	o-Cresol	2	RfD	200.0 <sup>a</sup>
D024	m-Cresol	2	RfD	200.0 <sup>a</sup>
D025	p-Cresol	2	RfD	200.0 <sup>a</sup>
D026	Cresol	2	RfD	200.0 <sup>a</sup>
D016	2,4-D	0.1	MCL	10.0
D027	1,4-Dichlorobenzene	0.075	MCL	7.5
D028	1,2-Dichloroethane	0.005	MCL	0.5
D029	1,1-Dichloroethylene	0.007	MCL	0.7
D030	2,4-Dinitrotoluene	0.0005	RSD	0.13 <sup>b</sup>
D012	Endrin	0.0002	MCL	0.02
D031	Heptachlor (and its hydroxide)	0.00008	RSD	0.008
D032	Hexachlorobenzene	0.0002	RSD	0.13 <sup>b</sup>
D033	Hexachloro-1,3-butadiene	0.005	RSD	0.5
D034	Hexachloroethane	0.03	RSD	3.0
D008	Lead	0.05	MCL	5.0
D013	Lindane	0.004	MCL	0.4
D009	Mercury	0.002	MCL	0.2
D014	Methoxychlor	0.1	MCL	10.0
D035	Methyl ethyl ketone	2	RfD	200.0
D036	Nitrobenzene	0.02	RfD	2.0
D037	Pentachlorophenol	1	RfD	100.0
D038	Pyridine	0.04	RfD	5.0 <sup>b</sup>
D010	Selenium	0.01	MCL	1.0
D011	Silver	0.05	MCL	5.0
D039	Tetrachloroethylene	0.007	RSD	0.7
D015	Toxaphene	0.005	MCL	0.5
D040	Trichloroethylene	0.005	MCL	0.5
D041	2,4,5-Trichlorophenol	4	RfD	400.0
D042	2,4,6-Trichlorophenol	0.02	RSD	2.0
D017	2,4,5-TP (Silvex)	0.01	MCL	1.0
D043	Vinyl chloride	0.002	MCL	0.2

\*MCL = maximum contaminant level or National Interim Primary Drinking Water Standard; RSD = risk-specific dose; RfD = reference dose.

<sup>†</sup>The regulatory level equals the chronic toxicity reference level times a dilution/attenuation factor (DAF) of 100, unless otherwise noted.

<sup>a</sup>If o-, m-, and p-cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. Note that D026 was added to the final rule for this purpose, but is not a new constituent.

<sup>b</sup>The quantitation limit (i.e., five times the detection limit) is greater than the calculated regulatory level; thus, the quantitation limit becomes the regulatory level.

Source: 55 FR 11804 and 11815-11816.



SK LAB #: 91-11-002  
 SK CONTROL #: 118508-1  
 SK SAMPLE #: 227280  
 DATE SAMPLED: 10/31/91  
 DATE RECEIVED: 11/1/91  
 DATE REPORTED: 11/26/91  
 # OF PHASES: 1

GENERATOR NAME: Sylvanus Products, Inc.  
 MATERIAL DESCRIPTION: Water  
 PERCENT DRY SOLIDS: 0.11%

### TCLP ANALYTICAL RESULTS

Listing Toxicity Characteristic Contaminants

EPA WASTE #	ANALYTE	DATE ANALY	REG LIMIT (mg/L)	PRAC QUAN LIMIT (mg/L)	AMOUNT DETECTED (mg/L)	MTRX SPIKE REC %	FINAL RESULTS (mg/L)
	<b><u>METALS</u></b>						
D004	Arsenic	11/06	5.0	0.02	<0.02	99	<0.02
D005	Barium	11/13	100.0	0.4	<0.4	102	<0.4
D006	Cadmium	11/07	1.0	0.01	<0.01	111	<0.01
D007	Chromium	11/08	5.0	0.16	<0.16	102	<0.16
D008	Lead	11/07	5.0	0.04	<0.04	89	<0.04
D009	Mercury	11/11	0.2	0.08	<0.08	98	<0.08
D010	Selenium	11/06	1.0	0.03	<0.03	105	<0.03
D011	Silver	11/06	5.0	0.008	<0.008	108	<0.008
	<b><u>VOLATILE ORGANICS</u></b>						
D018	Benzene	11/14	0.5	0.1	<0.1	94	<0.1
D019	Carbon Tetrachloride		0.5	0.1	<0.1	98	<0.1
D021	Chlorobenzene		100.0	0.1	<0.1	98	<0.1
D022	Chloroform		6.0	0.2	<0.2	98	<0.2
D027	1,4-Dichlorobenzene		7.5	0.1	<0.1	96	<0.1
D028	1,2-Dichloroethane		0.5	0.2	<0.2	90	<0.2
D029	1,1-Dichloroethylene		0.7	0.5	<0.5	96	<0.5 ✓
D035	Methyl Ethyl Ketone		200.0	0.6	<0.6	98	<0.6
D039	Tetrachloroethylene		0.7	0.1	<0.1	96	<0.1
D040	Trichloroethylene		0.5	0.1	<0.1	94	<0.1
D043	Vinyl Chloride		0.2	0.2	<0.2	96	<0.2 ✓

Allan A. Manteuffel Technical Center

P.O. Box 92050  
 Elk Grove Village, IL  
 60009-2050

12555 W. Old Higgins Rd.  
 Elk Grove Village, IL 60007  
 Telephone: 312/694-2700  
 Fax: 312/694-2732

SK LAB #: 91-11-002  
SK CONTROL #: 118508-1  
SK SAMPLE #: 227280

EPA WASTE #	ANALYTE	DATE ANALY	REG LIMIT (mg/L)	PRAC QUAN LIMIT (mg/L)	AMOUNT DETECTED (mg/L)	MTRX SPIKE REC %	FINAL RESULTS (mg/L)
	<u>BASE/NEUTRAL/ACIDS</u>						
D023	o-Cresol	11/18	200.0	0.01	<0.01	78	<0.01
D025	m & p-Cresol		200.0	0.01	<0.01	76	<0.01
D030	2,4-Dinitrotoluene		0.13	0.01	<0.01	92	<0.01
D032	Hexachlorobenzene		0.13	0.01	<0.01	66	<0.02
D033	Hexachlorobutadiene		0.5	0.01	<0.01	79	<0.01
D034	Hexachloroethane		3.0	0.01	<0.01	58	<0.02
D036	Nitrobenzene		2.0	0.01	<0.01	88	<0.01
D037	Pentachlorophenol		100.0	0.05	<0.05	61	<0.08
D038	Pyridine		5.0	0.02	<0.02	1	<2.0
D041	2,4,5-Trichlorophenol		400.0	0.01	<0.01	84	<0.01
D042	2,4,6-Trichlorophenol		2.0	0.01	<0.01	91	<0.01

Extraction/Digestion Dates: Bottle Leach: NR\*1  
ZHE Leach: NR\*1  
BNA: 11/6/91

Comments: Only results with matrix spike recoveries  
below 80% are corrected.

\* Leaching not required.

Requested TCLP analysis does not show any characteristics.  
No associated preship indicated. Refer to above data summary  
for details.

Reviewed By:

Manager

Date

Corporate Review

Date



ACCEPT

SILK SCREENING  
WASTE WATER

ACCEPT

FLUID RECOVERY SERVICES  
SILVANUS PRODUCTS INC  
WASTE WATER/SILKSCREEN SPRAY BOOTH

CONTROL #: 0000126621-9  
LAB #: 0000033037-8  
SURVEY #: 0000233357

CUSTOMER INFORMATION: 5030-01-9103

FEDERAL EPA ID: MOD092351642  
STATE EPA ID: 01659

SILVANUS PRODUCTS INC  
40 MERCHANT ST  
ST GENEVIEVE MO 63670

ATTN: VERNON T SCHWENT

BRANCH: 503001 - CAPE GIRARDEAU

GENERATOR: SILVANUS PRODUCTS INC  
NATURE OF BUSINESS: MNFG PAINTER  
FEDERAL EPA ID: MOD092351642 IL: MO: 1659 ST: ID: STATUS: SQG  
FACILITY ADDRESS: FOR MANIFEST BILLING:  
40 MERCHANT ST  
ATT VERN SCHWENT  
ST GENEVIEVE MO 63670

GENERAL DESCRIPTION: WASTE WATER/SILKSCREEN SPRAY BOOTH  
PROCESS DESCRIPTION: FROM SPRAY CLEANING SILK SCREENS  
GENERATION AMOUNT: 55 GALLONS PER MONTH  
AMOUNT ON HAND: 55 IN DRUMS  
SHIPPING FREQUENCY: 12WK IN DRUMS  
COLOR: LIGHT BLUE/CLEAR PCT SOLIDS NOT SAMPLED: PH RANGE: 4-10  
LAYERS OR PHASES: ONE PHYSICAL STATE: LIQUID VISCOSITY: LOW  
MATERIAL COMPOSITION: VOL% CODE MAX TYPICAL  
WATER W 100.00

ATTACHMENTS: TCLP  
RESTRICTED SUBSTANCES: NONE  
HAZARD CLASS: NUMBER: NEED ASSISTANCE

EPA WASTE DESCRIPTION AND TREATMENT STANDARDS: RCRA HAZARDOUS WASTE: NO

NOT RCRA WASTE SIGNATURE? YES 01/23/1992 STATE WASTE CODES: NOT SURE

REGULATED CHEMICAL CODES: NOT SURE  
P.O. NO: 28120 TYPE OF SAMPLE: GRAB # OF DRUMS SAMPLED: 0 TAKEN BY: SK REP  
NAME: VERNON T SCHWENT TITLE: SUPV 01/23/1992 (314) 883-3521  
COMMENTS: REFER TO TCLP ANALYSIS #227280 FOR NON HAZ WASTE

CORPORATE REVIEWS:	DISPOSITION	REVIEWER	DATE	POSSIBLE FACILITIES:	PRICING CODE:
TECHNICAL:	ACCEPT	JHP	01/31/92	658	F2
REGULATORY:	ACCEPT	AAD	01/31/92		
OPERATING:	ACCEPT	JWH	01/31/92		

APPROVED FACILITIES:  
(658) SAFETY-KLEEN CORP  
STATE HWY 146  
NEW CASTLE KY 40050  
FED EPA#: KYD053348108  
STATE EPA#:  
TELEPHONE: 502/845-2453  
STATE CODE:

APPROVD 0001055 DRUM OR BULK  
DOT-EPA NOT REGULATED BY USDOT OR USEPA.  
DESC. DESCRIPTION SHOULD BE REFLECTIVE  
OF THE WASTE STREAM.  
COMMENTS: OK FOR WASTE WATER ONLY. FRS PART 82102.

0000777 NOT FOR MANIFEST  
PROPER SHIPPING DESCRIPTION WAS BASED  
ON THIS SINGLE ANALYSIS. GENERATOR MUST  
CERTIFY THAT SHIPMENT IS NOT HAZARDOUS.

EPA WASTE CODES  
NONE

THIS SERVES AS NOTICE PER, 40CFR264.12(B), THAT THE FACILITY(IES) NOTED ABOVE  
HAS THE APPROPRIATE PERMITS AND IS WILLING TO RECEIVE THE MATERIAL DESCRIBED.

BRANCH/SUBMITTER: 503001  
MIKE DOWNEY

MATERIAL ANALYSIS

PAGE 2  
COMPLETED: 02/03/92  
REVISED: 02/03/92

ACCEPT

FLUID RECOVERY SERVICES  
SILVANUS PRODUCTS INC  
WASTE WATER/SILKSCREEN SPRAY BOOTH

ACCEPT

CONTROL #: 0126621-9  
SURVEY #: 233357

GENERAL ANALYSIS OF TOTAL SAMPLE

COLOR : LT GRAY/LT BLUE  
WATER CONTENT : 99.2 WT%  
NON-VOLATILE RESIDUE : 1.1 WT% DESCRIPTION: SOLID  
FLAMMABILITY : NO FLASH AT 142 F BY SETAFLASH  
FLAMMABILITY : NO FLASH AT 102 F BY SETAFLASH  
PH : EXTRACT BY METER 9.6  
RADIOACTIVITY : NONE DETECTED  
COMMENTS: 3% SOLID/NO FLASH AT 202F

FUEL EVALUATION OF TOTAL SAMPLE

HEAT CONTENT: < 5000 BTU/LB  
TOTAL HALOGENS: < 5.0 WT%  
ASH UPON COMBUSTION: < 5.0 WT%

GENERAL COMPOSITION:

	SPECIFIC GRAVITY	VISCOSITY (CENTIPOISE)	GENERAL COMPOSITION BY:	
			APPEARANCE (VOL%)	TOTAL (WT %)
AQUEOUS PHASE (FREE WATER)			100.0	100.0
ORGANIC PHASE (FEEDSTOCK)			0.0	0.0
BOTTOM SLUDGE (SEMISOLIDS)			0.0	0.0
BOTTOM SOLID (SETTLED SOLIDS)			0.0	0.0
TOTAL	1.000	< 50 CPS	100.0	100.0

SPECIFIC COMPOSITION OF TOTAL SAMPLE

	COMPOSITION OF:	TOTAL	TOTAL
		SAMPLE (WT%)	SAMPLE (WT%)
WATER CONTENT		99.2	99.2
NON-VOLATILE RESIDUE	DESCRIPTION: SOLID	1.1	1.1
VOLATILE ORGANICS BY DIFFERENCE		0.0	0.0
TOTAL		100.0	100.0

VLATILE ORGANIC COMPOSITION OF TOTAL SAMPLE BY GAS CHROMATOGRAPHY  
SAMPLE PREPARATION METHODS: NEAT  
DETECTION METHODS : FID, FID

COMPOUND NAME	COMPOSITION OF:	VOLATILE ORGANICS (WT%)	VOLATILE ORGANICS (WT%)	TOTAL SAMPLE (WT%)
TRACES OF VOLATILE ORGANICS DETECTED (<1.0% EACH)	CODE CAS NUMBER			
TOTAL	TR 0-27-1	100.0	100.0	0.0
		100.0	100.0	0.0

MMARY OF VOLATILE ORGANIC COMPOSITION BY COMPOUND CHEMICAL CLASS WT%:

ALCOHOLS	ALIPHATIC HYDROCARBONS
AROMATIC HYDROCARBONS	CHLORINATED SOLVENTS
ESTERS	ETHERS
GLYCOL ETHERS	INHIBITORS
KETONES	NITROGEN COMPOUNDS

ECIFIC ORGANIC COMPOSITION

POLYCHLORINATED BIPHENYLS (PCBS): NONE DETECTED <

LABORATORY REVIEW: R

LEVEL: SEG CODE: RELEASED: 02/03/92  
3 REVIEWERS: AJ AJ ANALYZED: 01/31/92  
SH WATER.

TRACKING INFORMATION:

SURVEY RECEIVED : DATE FACILITY  
SAMPLE RECEIVED : 01/27/92 SK TECHNICAL CEN  
RESAMPLE SHIPPED :  
RESAMPLE RECEIVED :

ANALYSES CONTAINED HEREIN ARE PERFORMED SOLELY FOR THE PURPOSE OF QUALIFYING THE ANALYZED  
ERIALS FOR ACCEPTANCE BY SAFETY-KLEEN IN ACCORDANCE WITH ITS PERMITS AND PROCESSING CAPABILITY.

END OF DOCUMENT



SK LAB #: 91-11-002  
 SK CONTROL #: 118508-1  
 SK SAMPLE #: 227280  
 DATE SAMPLED: 10/31/91  
 DATE RECEIVED: 11/1/91  
 DATE REPORTED: 11/26/91  
 # OF PHASES: 1

GENERATOR NAME: Sylvanus Products, Inc.  
 MATERIAL DESCRIPTION: Water  
 PERCENT DRY SOLIDS: 0.11%

### TCLP ANALYTICAL RESULTS

#### Listing Toxicity Characteristic Contaminants

EPA WASTE #	ANALYTE	DATE ANALY	REG LIMIT (mg/L)	PRAC QUAN LIMIT (mg/L)	AMOUNT DETECTED (mg/L)	MTRX SPIKE REC %	FINAL RESULTS (mg/L)
	<b><u>METALS</u></b>						
D004	Arsenic	11/06	5.0	0.02	<0.02	99	<0.02
D005	Barium	11/13	100.0	0.4	<0.4	102	<0.4
D006	Cadmium	11/07	1.0	0.01	<0.01	111	<0.01
D007	Chromium	11/08	5.0	0.16	<0.16	102	<0.16
D008	Lead	11/07	5.0	0.04	<0.04	89	<0.04
D009	Mercury	11/11	0.2	0.08	<0.08	98	<0.08
D010	Selenium	11/06	1.0	0.03	<0.03	105	<0.03
D011	Silver	11/06	5.0	0.008	<0.008	108	<0.008
	<b><u>VOLATILE ORGANICS</u></b>						
D018	Benzene	11/14	0.5	0.1	<0.1	94	<0.1
D019	Carbon Tetrachloride		0.5	0.1	<0.1	98	<0.1
D021	Chlorobenzene		100.0	0.1	<0.1	98	<0.1
D022	Chloroform		6.0	0.2	<0.2	98	<0.2
D027	1,4-Dichlorobenzene		7.5	0.1	<0.1	96	<0.1
D028	1,2-Dichloroethane		0.5	0.2	<0.2	90	<0.2
D029	1,1-Dichloroethylene		0.7	0.5	<0.5	96	<0.5
D035	Methyl Ethyl Ketone		200.0	0.6	<0.6	98	<0.6
D039	Tetrachloroethylene		0.7	0.1	<0.1	96	<0.1
D040	Trichloroethylene		0.5	0.1	<0.1	94	<0.1
D043	Vinyl Chloride		0.2	0.2	<0.2	96	<0.2

Allan A. Manteuffel Technical Center

SK LAB #: 91-11-002  
 SK CONTROL #: 118508-1  
 SK SAMPLE #: 227280

EPA WASTE #	ANALYTE	DATE ANALY	REG LIMIT (mg/L)	PRAC QUAN LIMIT (mg/L)	AMOUNT DETECTED (mg/L)	MTRX SPIKE REC %	FINAL RESULTS (mg/L)
	<u>BASE/NEUTRAL/ACIDS</u>						
D023	o-Cresol	11/18	200.0	0.01	<0.01	78	<0.01
D025	m & p-Cresol		200.0	0.01	<0.01	76	<0.01
D030	2,4-Dinitrotoluene		0.13	0.01	<0.01	92	<0.01
D032	Hexachlorobenzene		0.13	0.01	<0.01	66	<0.02
D033	Hexachlorobutadiene		0.5	0.01	<0.01	79	<0.01
D034	Hexachloroethane		3.0	0.01	<0.01	58	<0.02
D036	Nitrobenzene		2.0	0.01	<0.01	88	<0.01
D037	Pentachlorophenol		100.0	0.05	<0.05	61	<0.08
D038	Pyridine		5.0	0.02	<0.02	1	<2.0
D041	2,4,5-Trichlorophenol		400.0	0.01	<0.01	84	<0.01
D042	2,4,6-Trichlorophenol		2.0	0.01	<0.01	91	<0.01

Extraction/Digestion Dates: Bottle Leach: NR\*1  
 ZHE Leach: NR\*1  
 BNA: 11/6/91

Comments: Only results with matrix spike recoveries below 80% are corrected.

\* Leaching not required.

Requested TCLP analysis does not show any characteristics.  
 No associated preship indicated. Refer to above data summary for details.

Reviewed By:

Manager

Corporate Review

Date

Date

## **APPENDIX I**

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### **RCRA Part A Application**

Please print or type in the unshaded areas only  
(fill-in areas are spaced for elite type, i.e., 1

characters/inch).

Form Approved OMB No. 158-R0175

FORM <b>1</b> GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY <b>GENERAL INFORMATION</b> Consolidated Permits Program (Read the "General Instructions" before starting.)	I. EPA I.D. NUMBER F M O D Q 9 2 3 5 1 6 4 2
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LABEL ITEMS	<b>PLEASE PLACE LABEL IN THIS SPACE</b>	<b>GENERAL INSTRUCTIONS</b> If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.
EPA I.D. NUMBER		
III. FACILITY NAME		
V. FACILITY MAILING ADDRESS		
VI. FACILITY LOCATION		

## II. POLLUTANT CHARACTERISTICS

**INSTRUCTIONS:** Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X'			SPECIFIC QUESTIONS	MARK 'X'		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

## III. NAME OF FACILITY

1	SKIP	GEORGIA-PACIFIC CORP, NATIONAL COVER DIV.
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## IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)		B. PHONE (area code & no.)	
2	MCKERSIE, PHILIP, RESIDENT MGR	314	883 3521

## V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX		B. CITY OR TOWN		C. STATE	D. ZIP CODE
3	40 MERCHANT ST.	4	STE. GENEVIEVE	MO	63670

## VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER		B. COUNTY NAME		C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
5	40 MERCHANT ST.	6	STE. GENEVIEVE				

NOV 24 1980

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST				B. SECOND			
7	2	7	8	2	(specify)	Looseleaf Binders, Checkbook Covers (Vinyl) Passbooks, Savings Acct. Books (Paper)	(specify)
C. THIRD				D. FOURTH			
7				7			

III. OPERATOR INFORMATION

A. NAME												B. Is the name listed in Item VIII-A also the owner?			
GEORGIA-PACIFIC CORP.												<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)										D. PHONE (area code & no.)					
F = FEDERAL M = PUBLIC (other than federal or state) S = STATE O = OTHER (specify) P = PRIVATE										A 5 0 3 2 2 2 5 5 6 1 15 16 17 18 19 20 21 22 23 24					
E. STREET OR P.O. BOX															
900 S.W. FIFTH AVENUE															
F. CITY OR TOWN										G. STATE		H. ZIP CODE		IX. INDIAN LAND	
PORTLAND										OR		9 7 2 0 4		Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)										D. PSD (Air Emissions from Proposed Sources)									
N										9 P									
B. UIC (Underground Injection of Fluids)										E. OTHER (specify)									
U										(specify)									
C. RCRA (Hazardous Wastes)										E. OTHER (specify)									
R										(specify)									

I. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

II. NATURE OF BUSINESS (provide a brief description)

Manufacture and decorate vinyl products. Notebook binders, menu covers, checkbook covers etc. Also manufacture bankbooks for recording loan payments, savings, etc.

II. CERTIFICATION (see instructions)

certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME & OFFICIAL TITLE (type or print)		B. SIGNATURE		C. DATE SIGNED	
Robert A. Schumacher Senior Vice President				11/18/80	

COMMENTS FOR OFFICIAL USE ONLY

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Form Approved OMB No. 158-S80004

FORM  
**3**  
RCRA

U.S. ENVIRONMENTAL PROTECTION AGENCY  
**HAZARDOUS WASTE PERMIT APPLICATION**  
*Consolidated Permits Program*  
(This information is required under Section 3005 of RCRA.)

I.	EPA I.D. NUMBER
F	M O D O 9 2 3 5 1 6 4 2 T/A C
1	2

**FOR OFFICIAL USE ONLY**

APPLICATION APPROVED		DATE RECEIVED (yr., mo., & day)		COMMENTS
23		24	- 78	

## II. FIRST OR REVISED APPLICATION

**A. FIRST APPLICATION** (place an "X" below and provide the appropriate date)

☒ **1. EXISTING FACILITY** (See instructions for definition of "existing" facility. Complete item below.)

YR.	MO.	DAY
2	9	11
73	74	75

**FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)**

☐ **2. NEW FACILITY** (Complete item below.)

YR.	MO.	DAY

**FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN**

**B. REVISED APPLICATION** (place an "X" below and complete Item I above)

☐ 1. FACILITY HAS INTERIM STATUS ☐ 2. FACILITY HAS A RCRA PERMIT

### III. PROCESSES – CODES AND DESIGN CAPACITIES

**3. PROCESS DESIGN CAPACITY** — For each code entered in column A enter the capacity of the process.

1. **AMOUNT** — Enter the amount.
2. **UNIT OF MEASURE** — For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
<b>Storage:</b>			<b>Treatment:</b>		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS	TANK	T01	GALLONS PER DAY OR LITERS PER DAY
TANK	S02	GALLONS OR LITERS	SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS		T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS	INCINERATOR		
<b>Disposal:</b>			<b>OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)</b>		
INJECTION WELL	D79	GALLONS OR LITERS			
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER			
LAND APPLICATION	D81	ACRES OR HECTARES			
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY		T04	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS			
UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS . . . . .	G	LITERS PER DAY . . . . .	V	ACRE-FEET . . . . .	A
LITERS . . . . .	L	TONS PER HOUR . . . . .	D	HECTARE-METER . . . . .	F
CUBIC YARDS . . . . .	Y	METRIC TONS PER HOUR . . . . .	W	ACRES . . . . .	B
CUBIC METERS . . . . .	C	GALLONS PER HOUR . . . . .	H	HECTARES . . . . .	Q
GALLONS PER DAY . . . . .	U	LITERS PER HOUR . . . . .	U		

**EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below):** A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

DUP																
T/A C																
1																
13 14 15																
LINE NUMBER	A. PROCESS CODE (from list above)			B. PROCESS DESIGN CAPACITY			FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)			B. PROCESS DESIGN CAPACITY			FOR OFFICIAL USE ONLY	
	1. AMOUNT (specify)			2. UNIT OF MEASURE (enter code)					1. AMOUNT			2. UNIT OF MEASURE (enter code)				
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
X-1	S	0	2	600			G		5							
-2	T	0	3	20			E		6							
1	S	0	1	5,500			G		7							
									8							
3									9							
4									10							

**III. PROCESSES (continued)**

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

**V. DESCRIPTION OF HAZARDOUS WASTES**

**EPA HAZARDOUS WASTE NUMBER** — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

**ESTIMATED ANNUAL QUANTITY** — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

**UNIT OF MEASURE** — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

**ENGLISH UNIT OF MEASURE** **CODE**  
 POUNDS.....P  
 TONS.....T

**METRIC UNIT OF MEASURE** **CODE**  
 KILOGRAMS.....K  
 METRIC TONS.....M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

**PROCESSES****1. PROCESS CODES:**

**For listed hazardous waste:** For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

**For non-listed hazardous wastes:** For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

**Note:** Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

**2. PROCESS DESCRIPTION:** If a code is not listed for a process that will be used, describe the process in the space provided on the form.

**NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER** — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

**EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below)** — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 10 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Continued from page 2.

NOTE: Photocopy this page before completing. If you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)													FOR OFFICIAL USE ONLY												
W 1													W DUP												
13 14 15													13 14 15 23 24 25 26												

DESCRIPTION OF HAZARDOUS WASTES (continued)													D. PROCESSES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
NO.	A. EPA HAZARD. WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE				C. UNIT OF MEASURE (enter code)	1. PROCESS CODES (enter)								2. PROCESS DESCRIPTION (if a code is not entered in D(1))																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Continued from the front.

#### IV. DESCRIPTION OF HAZARDOUS WASTES

(continued)

USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)

5	M	O	D	0	9	2	3	5	1	6	4	2	T/A	C
1	2													6

#### V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

#### VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

#### VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)

LONGITUDE (degrees, minutes, & seconds)

3 7 5 8 4 8 N

9 0 0 2 3 0 W

#### VIII. FACILITY OWNER

- ☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER

2. PHONE NO. (area code & no.)

3. STREET OR P.O. BOX

4. CITY OR TOWN

5. ST.

6. ZIP CODE

#### IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

ROBERT A SCHUMACHER

B. SIGNATURE



C. DATE SIGNED

11/18/80

#### X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

C. DATE SIGNED